

Red tape cuts NZ out of \$20m investment

by Rae Mazengarb

THE prospect of dealing with officials from 11 separate government agencies to establish operations here has ruled out New Zealand as a location option for an international corporation seeking an investment of up to \$20 million in the South Pacific.

Instead, it will set up its manufacturing plant in Australia.

The corporation was further deterred by what it considered a "naive" attitude to foreign investment.

New Zealand has been ruled out, too, from a proposal by the corporation to establish a Pacific region management office. It had appeared politically, climatically and environmentally an attractive location, but Government policies were considered a "gross discouragement" to potential investors.

The managing director of the corporation's New Zealand subsidiary wrote to NBR to point out that New Zealand had appeared ideal for the establishment of a manufacturing plant to supply the Pacific region with the corporation's commodity.

But when the company sought to ascertain the extent of Government interest in the proposal and determine what support it might be given, it received what looked to be a negative response. And the morass of bureaucratic involvement brought a halt to further investigation in this country.

The company is the world's dominant manufacturer of a product used extensively by the steel, foundry and abrasive industries.

It was aware of a potential variance developing between demand and supply of this commodity in the west-south Pacific region, and decided it should locate a manufacturing plant in the region.

All the raw materials for the

product were freely and abundantly available in both New Zealand and Australia, said the New Zealand subsidiary's managing director. Thus the feasibility of both countries as possible locations had to be studied.

The operation appeared to fit New Zealand development criteria. Raw materials were indigenous and their use posed no ecological problems, the industry would be in a depressed region, it would employ more than 100 men, the capital would be of American origin and at least 90 per cent of production would be exported at comparable world prices.

Electricity was required, but the corporation did not consider the amount significant in power-planning terms.

Government investment was welcomed.

To determine the degree of Government interest and support, the company first approached a senior member of Government.

At this initial meeting, interest in the project appeared high, but the company was cautioned it must be patient in dealing with the bureaucracy.

The company was advised to keep as much of the negotiation on a personal basis and as much out of the hands of departments as possible.

But at the next meeting, attended by officials from several departments, company representatives were told that they would be required to deal separately and individually with 11 departments or authorities.

After the meeting, a Department of Trade and Industry official wrote to the company setting out in detail the information required from it prior to "granting your company permission to establish this industry".

The company reacted: "We are not seeking 'permission' to establish this industry; we are endeavouring to determine the

degree of your Government's 'support' and 'interest' and some indication of what assistance may be offered us if we were to bring this industry to your country.

"We are not prepared to conduct a detailed on-site feasibility study which virtually wants to know how much petty cash we will have in five years' time, prior to finding out whether your Government is even interested."

From the company's viewpoint, the Government had been approached with a proposal which it felt would benefit New Zealand. Before carrying out further costly work, the company wanted only some expression of the co-operation and interest which could be expected from Government.

Instead, the company received a reaction "based on the posture that New Zealand had something our corporation wanted and that the Department therefore was in a position to set conditions prior to granting 'permission'".

The managing director of the New Zealand subsidiary pointed out that to establish such an industry in this country meant dealing with an awesome number of bureaucrats. But as an encouragement to foreign investors, the Malaysian Government has established a single Governmental authority to resolve all Government-related problems for potential investors.

The company suspended its investigation in New Zealand and headed for Australia. The reception there was one of keenness to attract such an investment.

On first approach, the State Government concerned expressed its support for the project and immediately stated that, subject to verification that the proposal was worthwhile to the State, it would provide free land (on a pepper-corn lease basis) and would negotiate a long-term power contract direct with the State Power Authority. And it indicated it could be interested in contributing up to 50 per cent of the share capital through a State-owned subsidiary.

Already feasibility studies are being carried out on-site, and the corporation says it is not prepared to consider that a New Zealand option even exists.

New Zealand was ruled out of the second proposal — to establish a Pacific region management office to act for the corporation.

It was initially considered that New Zealand had good

travel and tele-communication links with both the United States and the West and South Pacific region. Establishment costs were lower here than in the other optional locations — Sydney and Hong Kong.

But against New Zealand as a location went the 10 per cent travel tax and the fact that the regional executive was required to make repeated individual application for overseas funds each time he travelled outside the country (which would be frequent).

These conditions existed even though the air fares and the foreign exchange would be

reimbursed to New Zealand from the United States corporation.

Tax rates were seen as a gross discouragement to an American executive relocating himself to New Zealand, at 60 per cent in New Zealand compared with 32 per cent in Australia and a mere 18 per cent in Hong Kong.

More iniquitous, from the company's point of view, was the fact that although the executive would spend 50 per cent of his time outside the country, his total income was subject to New Zealand income tax.

Inside

FOR National, a leadership question mark and traditional support uncertainties amid real economic problems; for Labour, a deputy leadership race and voter loyalty doubts; for Social Credit, the riddle of how to turn a flash-in-the-pan into a growing conflagration. Colin James predicts a very interesting year — Page 2.

ECONOMIC activity did not stop during the holidays, rather news about the economy made way for news on UFOs, cricket and other Christmas New Year preoccupations. Our Economics Correspondent details both the good news and the bad — Page 7.

Montana moves out of retailing

SUBJECT to approval of the Liquor Licensing Control Commission, Montana Wines will sell its 27 retail outlets to L D Nathan, Ballins and Quill Morris Ltd.

The sale price for the 27 Weinkellers will be about \$750,000.

Montana's chief executive, G. Stormont, said the sale signalled a redefinition of Montana's objectives.

"We are wine growers, not sellers. Owning retail outlets put us in competition with our own customers," he said.

Nathans and Ballins will buy

50 per cent of the Weinkellers located in the Northern half of the North Island. Nathans and Ballins (already involved in a joint liquor retailing venture) and Allied Liquor Merchants will form another joint company to operate the 12 Weinkellers in the Auckland region.

Christchurch-based Quill Morris will take over the southern group of Weinkellers.

Some wine sources welcome the move by Nathans and Ballins as a streamlining of the distribution system — one that will cut handling and transport costs.

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Why 1979 shapes up as an interesting year

by Colin James

TOWARDS the end of last year a high party official — it does not matter of which party — prophesied to me a very interesting year ahead. I agree.

Take the Labour Party first. The leader and deputy leader are required by party rules to put their jobs on the line early next year.

Bill Rowling is safe (for the moment, anyway). But there is a general, though not unanimous, feeling in the caucus that Bob Tizard will be replaced.

Nine months ago some Auckland MPs came close to mounting a coup in David Lange's favour. They were convinced they would get a big majority to dump Tizard, but pulled back when they could not get agreement on Lange.

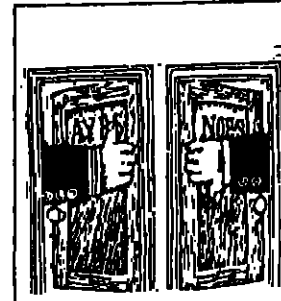
That experience has ensured that this year will be a long campaign for the job.

Lange starts a favourite. He was the only Labour MP bar Rowling to be chosen as the person most preferred as

Prime Minister by more than 1 per cent of the 1000 respondents to the post-election survey on December 2 by the Haylen Research Centre for the Auckland Star, TV One and National Business Review. He scored 7 per cent, second highest — behind Brian Talboys — of the non-leaders. He showed also that he can bridge the gap between his own middle class professional background and Labour's working class voters.

But Lange has his doubters — both as to staying power and as to the degree of his commitment to the party cause. Others, therefore, claim attention as rivals.

Not to be overlooked is Russell Marshall, the uncharacteristically (for the Labour Party) tough chief whip who, on the formulation of tactics both inside and outside the House, is likely to acquire a sort of de facto deputy leadership status as the year goes on. That gives him the inside running against the ambitious Mike Moore (who



POLITICS

has ground to make up for his three years absence) and the loud Richard Prebble.

Time has slipped away from Arthur Faulkner, who now looks bound for obscurity (and retirement?) with his overdue departure from the presidency in May, which in itself poses a formidable question for the party.

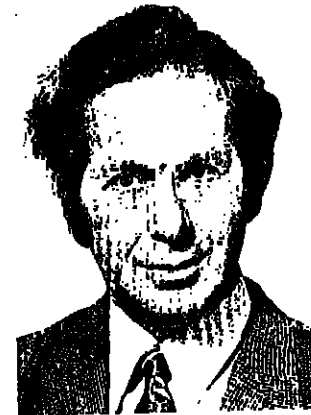
An increasing number of party activists are coming to believe that the national office must be upgraded to match its efficiency and tactical skill the Chapman-Leay team at the

National Party, though the names being tossed around so far give little hope of that being achieved.

If Labour is to hold together the largely anti-Muldoon membership it built up from 1976 to 1978, it will need inspiring and inspired top executives who are prepared to dedicate themselves to the organisation, however much less glamorous that role may appear than the parliamentary benches.

The lesson is to be learnt from George Chapman, who must be counted among the half-dozen most influential political men in the country. Indeed, it is Chapman — perhaps in tandem with Barrie Leay — to whom, in the current absence of cohesive caucus strength, is likely to fall the awesome responsibility of deciding whether Robert Muldoon should lead the party in 1981.

The lessons of 1957 and 1972 will dictate that a leadership change, if there is to be one, must occur some time in 1980.



RUSSELL MARSHALL ... inside running

and that a decision as to whether it must be done will have to be all but taken by the end of this year.

The easy decisions are always the most appealing and the party may gradually convince itself, as the 1978 election recedes into the distance, that Muldoon was only the tip of an iceberg of resentment at the party due primarily to the economic difficulties (Chapman has already floated this line). In other words, melt the iceberg and the anti-Muldoonism will melt, too.

Two factors may cloud this cosy scenario, however. The economic miracle, as some economists expect, may come apart altogether this year as the full impact of the huge internal deficit works through and corrective measures have to be taken.

If this comes to pass, there is not going to be much left of the Finance Minister's economic reputation.

And if he continues petulant, writing letters to newspapers and cancelling press conferences, and keeps on periodically thumping unfortunate people who get in his way, the party at large may make Chapman's decision for him.

Whatever claims may be made for the "broad spectrum" the party's membership is supposed to encompass, it is the middle class which provides its driving force, its political ethos and its work-force.

Broadly speaking, these people would fit themselves into the professional, directorial and managerial occupational categories (plus farming in the countryside).

People who chose these categories in response to the Haylen survey formed a considerably smaller proportion of those attracted to National in 1978 from elsewhere (Haylen's so-called "new National" voters) than among those who voted National both in 1975 and 1978 (so-called "loyal National" voters).

By contrast those categories formed a considerably larger percentage of "new Labour" voters than they did of "loyal Labour" supporters, suggesting that Labour may have gained at National's expense in what should be National's territory.

The converse was true in 1975, when National made inroads into Labour's territory, the manual worker categories (skilled craftsman to labourer). Some of the Haylen data suggest that those gains evaporated in 1978, but nevertheless the proportion those two categories formed of "new National" voters in Haylen's 1978 sample was higher than the proportion of "loyal National" voters.

In Labour's case, the manual worker categories formed the same percentage of "new" voters as "loyal" voters. This suggests Labour may still be vulnerable in those categories — in 1978's



ARTHUR FAULKNER ... bound for obscurity?

case, to Social Credit, which converted as many of its manual worker Haylen survey respondents as Labour and, it seems, substantially increased its share of that vote.

The Haylen data need more analysis before firm conclusions can be drawn from them. In the meantime, the raise a tantalising poser is Social Credit.

Studies of Canadian federal and provincial elections by Professor Maurice Pinard, McGill University* indicate that third parties succeed when one major party is dominant and the major of position party is or becomes weak, in a period of "strain".

Social Credit has never succeeded in Pinard's terms in New Zealand — never having got more than 20 per cent of the vote. And, though National has at times (1966 and 1978, for example) pre-election looked like a "natural party of government", Labour has never been electorally weak in the Pinard sense of getting less than one-third of the vote.

But all three peaks of Social Credit support — in 1954 after the 1951 waterfront strike, in 1966 when Norman Kirk was newly leader of a dissent party, and in 1978 when Labour had all year looked weak beside National — have come at times when Labour's Opposition, has shown signs of weakness amid economic uncertainty. In 1978, though Labour looked weak, the Opposition party, National, was strong, so, in Pinard's terms, naturally collected the anti-Government swing.

The Social Credit upswing last year, therefore, has a certain logic to it. Indeed, has Labour scored worse in 1978 than its 39 per cent or had it been rocked by scandals or internal disintegration, Bruce Beetham might have logically hoped for the 20 per cent-plus breakthrough.

Logic in the Pinard sense would also dictate that if Labour were to win in 1981, or to appear strong (even though perhaps in reality weak), Social Credit support would wane — though if Labour were to lose in 1981 and look weak in 1984 Social Credit could rise again.

Social Credit needs transparently weak Labour Party. Otherwise it is going to have to be extraordinarily imaginative and inventive to keep the disident pot on the boil.

For National, a leadership question-mark and traditional support uncertainties and real economic problems, in Labour, a deputy leadership race and voter loyalty doubt for Social Credit, the riddle of how to turn a flash-in-the-pot into a widespread and growing conflagration: a very interesting year.

* Maurice Pinard: The rise of a third party (Prentice-Hall). Selling — Leasing Phone 226 299 Wellington

harcourts

Devaluation: PM avoided substantive discussion

Economics Correspondent

THE Organisation for Economic Co-operation and Development's report on the New Zealand economy last week presented a view so different from that given by the Prime Minister a few days earlier that it looked like they were talking about different economies.

According to the OECD, since 1974 a series of unsustainably large balance-of-payments deficits has shifted the main emphasis of policy towards the problem of how to restore external balance to provide the conditions under which stable growth can be restored. New Zealand's adjustment problem may well be larger than for any other OECD country — and it could get worse.

To remedy some of the problems of the country's external imbalance, the OECD suggested that an exchange rate devaluation has much to recommend it as a longer-term solution.

But in his "state of the nation" address last week Prime Minister Rob Muldoon, by quoting recent statistics showing an improvement in our external position, gave the misleading impression that New Zealand's long term balance-of-payment problem is less serious than it is. In the last two months for which there are figures for the overseas exchange transactions (OET), the current account deficit has dropped sharply.

And Muldoon avoided a

substantive discussion of the devaluation issue by taking a sceptical view of those observers who forecast a rapid deterioration in our balance of payments from the middle of this year.

The OECD is among the more pessimistic of those with published forecasts, expecting a marked rise in the current account deficit to around \$1200 million in 1979, an increase from five per cent of GDP in 1978 to 6 1/2 per cent in 1979.

But Muldoon stubbornly continues to put off the day of reckoning. He said, "For my part, I want to see more work done before I am prepared to accept such a forecast of a deterioration."

And in fact he feels economic policy in last year's Budget has been so successful that "our problems going into next year are not great".

The OECD, in contrast, said that "No single policy or set of policies will quickly solve the problem of large external imbalance."

One reason Muldoon does not think there will be a rapid deterioration in the balance-of-payments position is the fact that Maui gas will come on stream. He expects that the existence of Maui will reduce our OET current account deficit by \$100 million in the next year.

But, Muldoon seems to be worried only about the way the economy looks on the surface. Even if the balance-of-payments position does improve temporarily because of Maui, the structure of the New Zealand economy is such that we will still have to face the



THE ECONOMY

problem of large external imbalances in the future.

As the OECD points out: "...It is important to recognise that the existence of Maui gas, substantial as the reserves seem to be, is in the nature of a bonus which should ease the implementation of positive adjustment policies rather than render them unnecessary."

The OECD's recommendation for devaluation is not unconditional. It observes

that in New Zealand, exporters may initially gain from a devaluation, but import price increases are passed on in higher prices and reverse the exporters' initial gains.

Normally, the ability of importers to pass on price increases is held in line by competition from overseas and domestic consumption of imports is held in line by demand management. The second condition can be regulated by Government adopting a less expansionary fiscal and monetary stance.

According to the OECD, the first condition concerning competition from abroad cannot work effectively until there are structural changes made to the New Zealand economy.

Here the OECD recommends the removal of quantitative import controls, usually governed by import licences.

"With quantitative controls it does not matter how much faster domestic prices rise



ROB MULDOON ... wants to see more work done.

than external prices as domestic producers are never under threat of increased import competition."

If domestic producers have to compete with overseas firms, they might become more efficient in order to be competitive.

And the removal of quan-

titative controls would not force New Zealand industry to the wall, in the OECD's opinion: "New Zealand industry would still be sheltered by a tariff which has recently been revised so as to be capable, in itself, of providing protection for the existing structure of New Zealand industry."

Only the future can tell whether Muldoon's view of the economy or the OECD's view is correct.

The OECD's view is certainly the better argued of the two. And if the OECD's warnings about New Zealand's balance-of-payments problems are not heeded, it may be necessary to introduce more drastic measures in the future to bring the economy back into line.

On the other hand, maybe we can be reassured by Muldoon's pointing out that the OECD used figures six months out of date — and that during those six months, the New Zealand economy has fundamentally improved.

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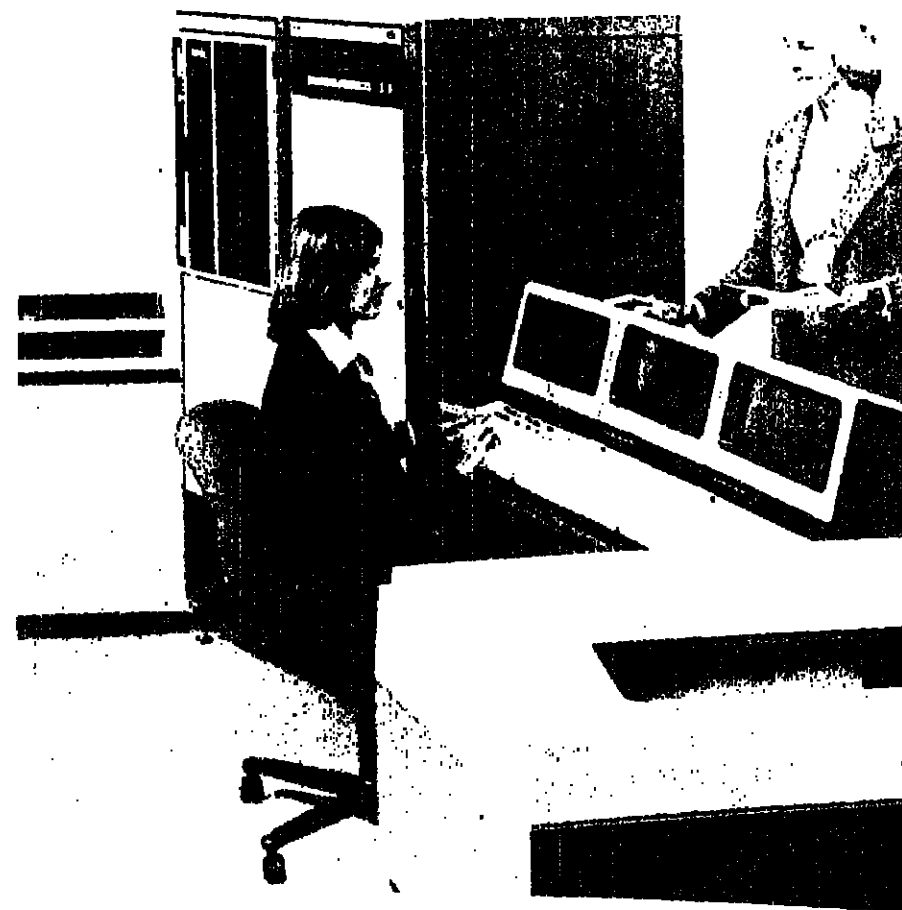
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Visa card to be computerised

by Stephen Bell

THE Bank of New Zealand has begun gearing up for electronic funds transfer on the basis of the Visa card.

The first few computer terminals designed to read the card's magnetic stripe code are already under test in the bank's Wellington head office. But development has been delayed by troubles in encoding the stripe with the customer's account number. About 60 per cent of the initial batch of Visa cards went out without a code in the magnetic stripe, and will not be usable in the terminals.

When the system is first opened to public use towards the middle of this year, terminal operation will be under the control of the bank teller, who will insert the card in a terminal on the bank's side of the counter.

The customer's account balance recorded on the Databank bureau's files will be checked for authorisation of a withdrawal. The amount deposited or withdrawn will be entered on the terminal and the balance record immediately updated.

In the near future, the bank envisages similar terminals on the customer's side of the counter, or even on the outside wall of the bank, allowing the customer to transact business outside bank opening hours. A definite date for such a development has not emerged, and it will clearly require some redesign of the terminals.

Looking to the long term, said Brian Clark of the bank's methods department, retailers could be using terminals as part of the Visa card system.

This would eliminate the present written slip and embossing machine, and with it the widespread criticism that a Visa card transaction is no quicker than writing a cheque.

At around the \$600 mark, the terminals are probably too expensive to interest any but the largest retailers. This part of the plan is not seen as coming to fruition until about 1985, said Clark, "but the bank is trying to position for it".

The magnetic stripe encoding difficulties had contributed to a delay in implementing the teller's terminal stage of the development, Clark acknowledged. Originally, the bank had intended to make the first teller terminals operational in February.

The stripes are encoded by the machine which embosses the customer's name on the card. Difficulties arose from a variety of factors, including dirt on the cards, poor "laying down" of the stripes with small holes in the magnetic material and "technical problems with the machinery".

Encoding of new Visa cards is proceeding satisfactorily, but the machinery, supplied by American company Jeaguard, has had to be slowed down. The production rate of cards has been "perhaps halved", Clark said.

Delays have also been experienced in development of programs to process terminal transactions. No attempt will be made to recall the unnumbered cards. By the time the terminal system comes into full operation, said Clark, most of the initial batch of cards will be due for replacement anyway.

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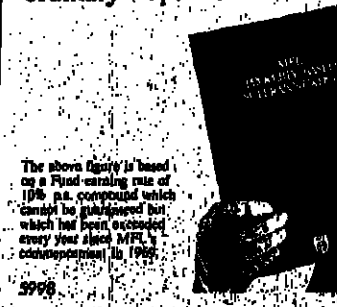
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EDITORIAL

"GIVEN the potential for misuse of the import licensing system, its administration is remarkably free of corruption and instances of attempts to apply improper pressure to departmental officers are rare," the Chief Ombudsman said in his report into the granting of import licences to former Tupo MP Roy La Varis. "There is no such evidence that any such efforts have succeeded."

But then the report acknowledged that these comments might have to be qualified. After the Chief Ombudsman had completed his inquiry and prepared his report, the department had drawn his attention to apparent irregularities unrelated to La Varis' company. Thus there were signs that some import licences "may have been issued or transferred without proper authority".

Trade and Industry Department investigations since then have uncovered a situation considered too serious to be dealt with by internal discipline. Now it is in the hands of the police.

All this gave rise last week to the disclosure by the Sunday Times that the police were investigating "large-scale corruption" within the department. The extent of this "corruption" remains to be seen (a police official has said "it does not involve more than one person"), but the CIB inquiries reportedly are expected to take at least another month, and the alleged corruption is undoubtedly concerned with import licensing.

Essentially, the Ombudsman found that, in the La Varis case, departmental officers did not observe normal routines and made "a serious error of judgment". The police investigations which are now being pursued may result in a more serious outcome — the criminal prosecution of a civil servant (or former civil servant). If so, nobody should take any smug satisfaction from the routing out of one corrupt official. Concern, rather, must be directed at reforming a system of import control which this newspaper has consistently argued is susceptible to abuse, or to the suspicion of abuse, because it is administered in secret.

Further, the granting of an import licence is the granting of a commercial privilege, and the arbitrary nature of the decision-making process encourages rule of men, not the rule of law, because there are no clear rules on who is and who is not eligible for an import licence. The Chief Ombudsman said officers — especially in head office — were continually required to consider matters for which there might be no precedent and which did not fall within the general guidelines, because of changing circumstances. The guidelines were complex and officers to a large extent were thrust back on their own good judgment on deciding how to apply them.

Later last week more fundamental aspects of import licensing were questioned. The OECD recommended devaluation of the New Zealand dollar, but said devaluation alone would not be enough; among other proposals, it argued for the abolition of import licensing to constrain domestic prices, and so keep them more in line with world prices.

Thus the removal of "quantitative import controls" was called for to expose New Zealand manufacturers to competition from the outside — although "New Zealand industry would still be sheltered by a tariff which has recently been revised so as to be capable, in itself, of providing an effective instrument of protection for the existing structure of New Zealand industry".

Irrespective of a devaluation, the Government should consider the OECD's advice and look not to reforming the import licensing system, but to determining if we shouldn't scrap it instead.

Bob Edlin.

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Korea: keeping up with the Japanese

ONE of the best ways to put the South Korean economy into perspective is to arrive in Seoul immediately after spending a few days in Japan. Forecasters confidently predict that Korea will "out-Japan Japan" within the next few years, but it is possible to see warning signs in Japan which may eventually be carried through to Seoul.

A Japanese airline pilots' strike — unheard of in the past — the difficulties before Narita Airport were finally opened, and continuing wage demands, all reflect the problems of an advanced society. By contrast, arrival at Kimpo Airport in Seoul is more relaxed. Though Government officials will apologise for its inadequacies, it seems more organised than Haneda and more able to cope with vast numbers of Japanese tourists than Taipei, even though it is scheduled for expansion.

President Park Chung Hee's re-election for a further six-year term was a foregone conclusion, but his economic success of the past few years, with Korea becoming one of the most successful non-oil producing countries in the Third World, and its economy transformed in the last 15 years from one of subsistence agriculture to a major industrial force, has provided a buffer against major political opposition and the stronger civil rights movement.

Last year proved no exception: Korea exported \$10 billion-worth of goods, and its Gross National Product grew in real terms by 10.3 per cent. Present forecasts for this year are that exports will reach \$12.7 billion, and that GNP will show growth of around 12 per cent.

A foreigner on his first visit to Seoul will be surprised at the comparatively high standards he finds, apart from poor street lighting and potholes in the roads.

He will feel the speed with which the economy is moving

KOREA belies its description, "The Land of the Morning Calm", as the country tries to emulate Japan's economic power.

But in time it may be overtaken by the same social problems as Japan's, says Spencer Adams of London's Financial Times in this report from Seoul, Korea.

From the wide range of consumer goods in the stores, mainly of Korean origin, and the impressive public transport system (even if taxis are difficult to obtain). The capital is perpetually covered by a haze of dust, as new office blocks and hotels move upwards day and night.

The five major industrial conglomerates that, to a large extent, will be responsible for the success of the present development plans, are supremely confident about their economic prospects. The Samsung Group (with turnover equalling 5 per cent of the country's GNP), Hyundai, Lucky, Daewoo and Sangyong, all quote statistics to endorse their views.

A visit to the large complex at Ulsan in the south east part of the country gives some indication of this industrial might. Fifteen years ago, it was merely a small fishing port with 6000 inhabitants. Now, it has 68 major factories and a population of 300,000. There, among other projects, Hyundai produces 70 per cent of the country's automobiles and buses and has the largest shipyard in the world, which retains a full order book and is profitable.

The Hyundai motor works is something of a showpiece — it received 4000 visitors last year and expects 15,000 by the end of 1978 — but its results speak for themselves. The company exported 1200 of its popular "Pony" family saloons in 1976, and 10,000 last year to some 30 countries in the Middle East, South America and Africa.

This year, the target is 25,000; for 1979, a staggering 100,000. Everywhere one hears of concern over the country's trading image. For years, South Korea's trade has been dominated by Japan and the United States. The same applies to tourism — these countries account for at least 60 per cent of the foreign visitors.

There is a real desire for

closer ties with Western Europe and other countries in Asia. Korea expects over 1,100,000 tourists in 1978, more than Japan. Next year, the country will play host to 200 delegates from PATA (the Pacific Area Travel Association), and is feverishly building hotels and other amenities to cater for them. Last year, tourism brought in \$400 million in foreign exchange to fuel the economy.

A recent report, *The Long-term Economic and Social Development of Korea 1971-1991* forecasts that by 1991 the country will have become one of the world's 20 major economic powers, per capita GNP equivalent to 1975 standards in Western Europe. But is it possible to plan so far ahead with any degree of certainty?

One has only to stand in the Demilitarised Zone and look out to the Bridge of No Return, to travel the mere 35 miles from Seoul to the border, to realise that it takes a jet aircraft three minutes to make the same journey, or to read the air raid regulations in the capital's hotel rooms to be dubious. On present forecasts, South Korea should be militarily self-sufficient only by 1983, even though the Americans are leaving at a rate of 8000 a year.

Economically, too, there could be problems. Further recession in world trade would hit Korean exports more than most. Inflation could also prove a problem. While the income per head improves year by year, the Koreans, like the Japanese, will become more sophisticated and less likely to work such long hours, placing the individual's interests a little ahead of the country's.

Yet GNP has risen smoothly by more than 10 per cent a year over the last decade. If Korea can tackle the next 10 years with the same determination, the forecasts may be proved right.

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MIRACLE man Muldoon's wizardry in dealing with the country's economy might well lead to the popular belief our Prime Minister has been blessed with divine powers. But a statement by the Right Honourable Rob last week lends credence to our suspicion that at least some of his miracles have been the result of his sleight of mouth.

Answering Labour leader Bill Rowling's criticisms of the Government's borrowing strategies, Muldoon's counter-attack included these spellbinding words: "It is good economic sense to borrow near the peak of a strong currency, as these currencies usually have relatively low interest rates. Then, even in the unlikely event of the Swiss franc doubling against the New Zealand dollar over the life of New Zealand's latest loan, for example, the arranged interest rate of 3.5 per cent would become an effective rate of 7 per cent — a rate which is still superior to those arranged by the last Labour Government."

No doubt many people were satisfied that these words amounted to a succinctly convincing put-down for Wee Willie Rowling and an effective justification of the Government's borrowing policies.

But hold on a minute. Repaying borrowed money isn't just a matter of looking after the interest rates. There's the small matter of the capital repayment too — and it won't be a small matter in the unlikely event of the Swiss franc doubling against the New Zealand dollar over the life of New Zealand's latest

loan, or even in the more likely event of its merely making much smaller gains against the New Zealand dollar.

NBR reporter Warren Berryman has picked up another journalism award.

New Zealand's top prize for investigative journalism was won by Berryman for two of a series of articles. One was a report on the unauthorised use of trust funds by a solicitor who was subsequently struck off; the other an article on the activities of a nominee investment company.

Judge D.J. Fitzgerald said that Berryman's work was clearly of an investigative nature where energy and skill had been employed pursuing his inquiries, unlike a number of other entries which consisted in the main of interviews with people voicing complaints.

Last month, Berryman won second place in the CBA Bank award for economic journalism.

THE Railways Department has been damaging its revenue-earning capacity as well as the goods it carries.

A country-town businessman took one of our staff to the back of his shop the other day to show the condition in which much of a consignment of goods had arrived. In a word, the condition was smashed.

And it wasn't the first time, the businessman lamented. Maybe it's because the goods he brings in are of the alcoholic variety...

Opposition to futures contract

Melbourne Correspondent

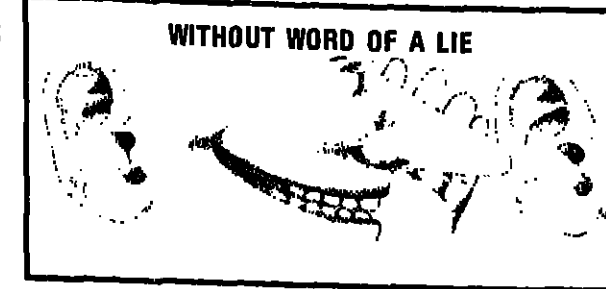
THERE has been strong reaction in Australian financial circles to the recent announcement by the Chicago Mercantile Exchange of the proposed formation of a futures contract in Australian dollars.

Members of the Sydney Futures Exchange are known to be antagonistic towards the proposal, and its currency consultative committee is reported to have made official inquiries of the Chicago Mercantile Exchange, seeking particulars of the contract, and the reasons for its introduction.

The current position of the Australian Federal Government is that circumstances do not justify the establishment of an Australian foreign exchange market operated by either the Futures Exchange or local trading banks.

The Australian Reserve Bank offers exporters and importers a limited cover against currency risks in trading. Involving the Australian dollar and other currencies. For the year 1977-78, it made a profit of \$452.6 million. This is a most atypical result, however. The Reserve Bank would normally make a big loss on this type of insurance. Generally, this unusual result has been attributed to freak conditions in foreign exchange markets, and the fact that Australian businessmen are frequently ignorant of the workings of the Australian dollar in relation to foreign currencies.

The major portion of Australian overseas trade is carried out in American dollars, and the general call for the devaluation of the Australian dollar overall had not prepared many Australian traders for the possibility that



But he's solved the problem by driving all the way to Wellington to pick up supplies. It's cheaper and all the goods now arrive intact.

Only trouble is that his business operations are centred well over 150km from the capital city — and that fact, in this regulation-ridden country, brings the legality of his enterprise into question. Still, by the time anyone gets round to nabbing him, it could be that the savings he has achieved by doing his own transporting will take care of the fine...

Christchurch's sports weekly *Seven O'Clock* could well take the prize for irrelevancy.

Apparently unable to fill the paper with recent news, the *Seven O'Clock* found a novel way of giving readers what they presumably hoped would be their money's worth.

It published news almost 20 years old — vintage journalism, perhaps. There was some freshness, maybe, in the story of how Maria Bueno, the one-time queen of Wimbledon, made a welcome return to the courts back in 1976.

But how many remember — indeed, how many want to remember? — the story of how Sjoukje Dijkstra won a gold medal in skating at the Innsbruck Olympics in 1964? Or how Irina Press won a gold

medal in the pentathlon at the 1960 Olympics, leaving Britain's Mary Rand (who won the gold four years later at Tokyo) with the silver? If we must hark back to the deeds of the past, couldn't we at least be bored by stories about New Zealand athletic heroes?

cent in October). The rest did not know. Even National voters in 1975 who intended to vote National again were not too enthusiastic about his chances — those thinking he would reach the Cabinet ranging between 28 per cent and 43 per cent.

BEN COUCH'S elevation to the Cabinet will have come as something of a surprise to his home constituency of Wairarapa.

National Business Review-Heylen Research Centre surveys of Wairarapa before the election asked voters what they thought his future would be — would he become a Cabinet minister, or remain a backbencher.

The voters were in no doubt. More than half in each survey thought he would remain on the back benches 64 per cent in June, 68 per cent in August and 57 per cent in October.

Only around 20 per cent thought he would make it to the Cabinet 64 per cent in June, 23 per cent in August and 36 per

AN enterprising branch office man suspected that many of the memos he was writing were not being given proper consideration back at head office. Indeed, his thoughts were even darker — the memos weren't even being read.

So he decided to test the efficiency of the company's internal communications by slipping into a batch of memos one which offered the boss "a pleasant surprise" if he had read that far.

"Send this note back and I will send you from my bank account one crisp dollar..." The branch man considered the money well spent when he learned that the boss did read the memos — at least, on this occasion.

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SOUTH BRITISH



Of course you can live without Chivas Regal.
The question is, how well.

Christmas holidays didn't halt economy

Economics Correspondent

NEWS about UFOs, cricket, horse racing, climbing accidents and road accidents dominated the columns of newspapers and the airtime of radio and television during the Christmas holidays. If there were visitors from outer space travelling in those UFOs, they would have found little information about the economy to report back.

But economic activity did not stop during the holidays. Rather, news about the economy simply went almost unreported.

So now that people are returning to work, let's catch up on both the good news and the bad.

In December, unemployment rose over the 50,000 mark. The combined total of registered unemployed and people on special work schemes was 52,750 on December 15. Of these, 23,144 were registered as unemployed and were not able to find work before Christmas. The rest, including large numbers of students, were on special work.

Good news for the Government is that it was able to collect \$293.6 million from its special New Zealand Government Savings Stock. The number of applicants for the lucrative stock was 73,700. This should help the Government finance its massive internal deficit.

But the bad news is that the internal deficit cannot be entirely financed through the private sector in New Zealand

and that the Government has had to borrow overseas as well.

By January 12, the Government had arranged loans of \$350 million since the election. These included loans totalling \$150 million borrowed in German marks and \$180 million borrowed in Swiss francs.

While the interest rates on these loans are about 6 per cent and 3½ per cent respectively, the repayments could become higher than expected if the mark and franc continue to appreciate against the New Zealand dollar.

Good news for the farming sector is that beef exports to the United States are likely to give New Zealand a \$150 million boost in foreign exchange earnings this year. This increase is likely without a corresponding rise in beef volumes exported because United States beef prices are climbing.

The Meat Board expects beef sales to the United States will pass the \$400 million mark.

Bad news released about the farming sector during the holidays was that farmers' incomes are believed to have fallen 37 per cent last year. Provisional statistics from the Meat and Wool Boards' Economic Service show farmers' net incomes for the period average \$13,500 in 1977-78, compared with an average net income of \$21,371 in the previous year.

Wage earners may be pleased with the news that the national average wage rose 13.4 per cent during the year to

October 1978. According to the October Half-Yearly Employment Information Survey conducted by the Labour Department, the average working male earns \$154.27 a week gross, while his working wife gets \$117.17. The national average income for both sexes is \$140.65.

But prices continue to increase at a rapid rate. Comparison of prices for the December quarter 1978 with those for the December quarter 1977 shows that over that year retail prices rose by 10.1 per cent.

News about New Zealand's balance of trade position continues not to be good. The Reserve Bank's latest figures for overseas exchange transactions show a trade surplus of nearly \$584 million for the November 1978 year. This compares with a deficit of \$105 million for the year ended November 1977.

But invisible payments substantially reduce these trade gains. For the 12 months ended November 1978, the deficit on invisible transactions was \$998 million. As a result, the OET current account deficit was \$414 million.

Finally, some good news for those still paying for their Christmas holidays. The minimum reserve assets which the trading banks are required to hold in January has been fixed at 43 per cent of demand deposits compared with 51 per cent in December. This should make your bank slightly more accepting of your overdraft than it was last month.

Call for Broker collapse protection

Melbourne Correspondent

THE Corporation of Insurance Brokers of Australia has launched a fresh attack on the Australian Government for its continued failure to protect the public against the collapse of insurance brokers.

The CIBA's national president, Frank Laird, said successive Australian Governments bore a major share of responsibility for the losses sustained by the Melbourne broking company, Cyril Stanley Pty Ltd, which early in December went into liquidation owing creditors an estimated \$A1.08 million.

Laird claimed that the appointment of liquidators to the company would have been most unlikely had the CIBA's calls for broker regulation been heeded.

The CIBA has been urging legislative control of brokers by the Australian Federal Government since 1968.

Laird said that repeated warnings by the CIBA and other broker organisations had been ignored.

He said: "Regular and thorough financial auditing would have prevented the accumulation of large deficits, and restrictions on the types of investment open to insurance brokers would have compelled temporarily surplus funds to be invested in approved securities."

The corporation also criticised underwriters whose credit policies allowed brokers to incur large debts.

Laird said it was significant that the largest debt was owed to a State insurance office which is insulated to some extent from the constraints of normal

commercial discipline.

Cyril Stanley acted as agent for the State Government Insurance Office of Victoria, and is reported to owe it almost \$A500,000.

A spokesman for the State Government Insurance Office confirmed that it was owed "a substantial sum of money" but declined to comment further. Government sources say that the company failed to meet a number of scheduled quarterly payments on policies with the State Government Insurance Office, and had placed itself in voluntary liquidation.

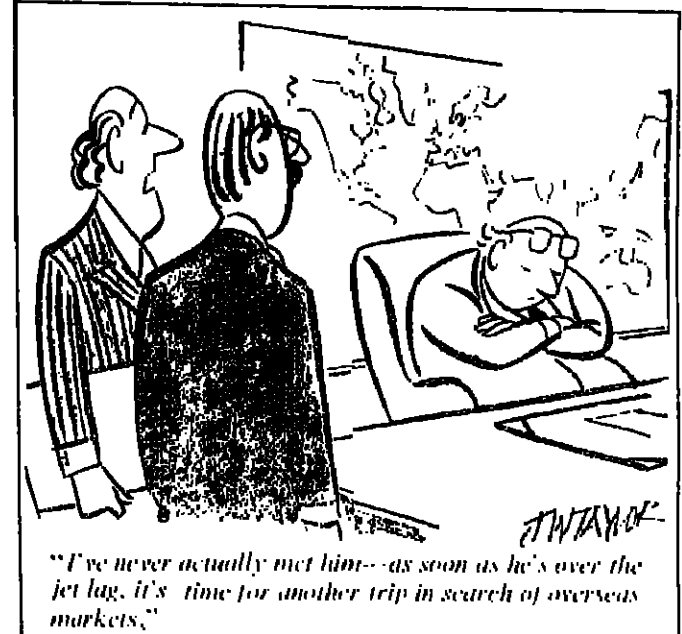
The Tasmanian and South Australian State Government Insurance Offices are also reported to be among major creditors of the company.

In addition a list of these

creditors prepared by the liquidators reveals that many of the country's leading private insurers are owed considerable sums.

The company's failure has focused attention on the question of what insurance brokers in Australia can do with premiums received from clients before passing them on to the insurance company. This matter is the subject of a special study being undertaken by the Australian Law Reform Commission.

While the CIBA's proposals are seen by some insurance brokers as drastic and unwarranted, the Stanley collapse clearly vindicates the persistence with which the group has lobbied the Australian Government for legislative control of insurance brokers.



Shaw business: Hollywood, Hong Kong-style

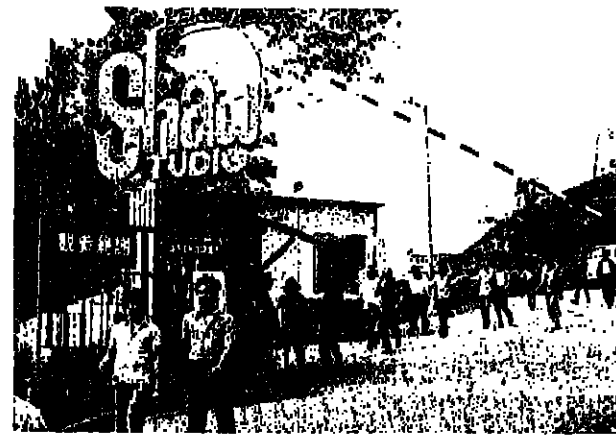
Tokyo Correspondent

HIGH in the hills overlooking Hong Kong's Clearwater Bay there are 46 acres known as Shaw's movie town.

The legendary Run Run Shaw CBE began a chain of theatres in the 1920s with his brother, things didn't get moving until 1959, when the Shaw brothers set up their Hong Kong Hollywood. The company logo was virtually identical to Warner Brothers, and chauffeur-driven starlets were eagerly spotted by the local press. The only thing missing was the unrestrained spending of the bygone big American studios. The Shaw brothers specialised in quickies — four weeks in the making — with budgets so low they almost have to get the film processed at the chemists.

They make around 40 shows a year, and many centre around so-called Kung Fu — as 'unrecognisable to the purists as the chow mein at the Te Puke tearooms. The action's the thing — in fact the stars don't usually bother to talk during the filming. Someone else dubs in the voice later. The Shaws have also dabbled in "sex comedies", and whether the arts are martial or marital, they've managed to make an impact on the international film market by keeping a close watch on national tastes. One cinematic masterpiece which left home as "The Sexy Killer", during its world circuit became "The Drug Connection", and later "Death Lady". If you've got the action, what's in a name? Money, that's what.

Thousands of hopefuls apply to be one of the chosen 40 to attend Shaw's annual party



SHAW STUDIO: entrance to the 46-acre complex

time acting school, where action — and even little acting — are studied.

The late Bruce Lee went there, just for kicks.

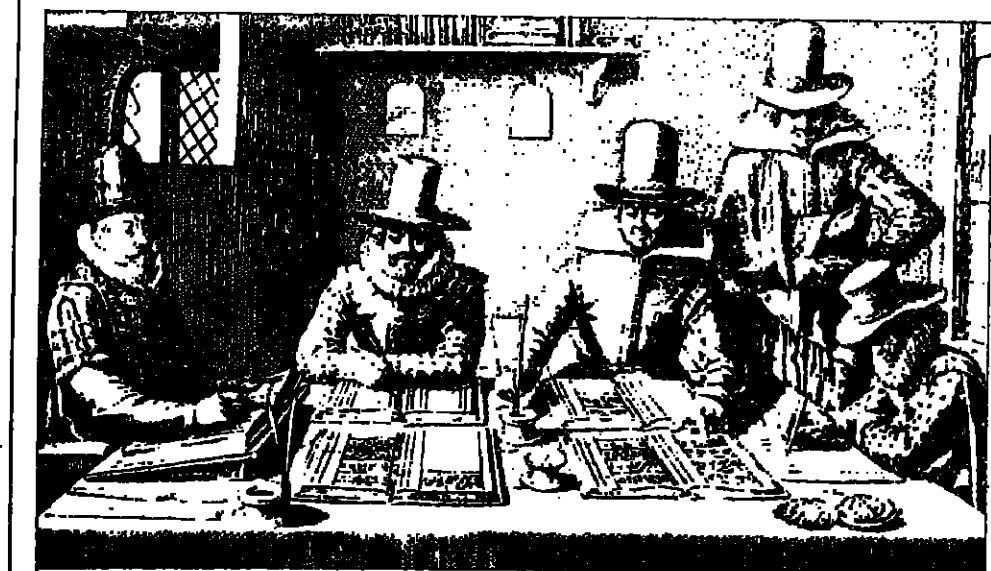
Production chief Chua Lam admits that excessive violence can have a socially harmful impact on an audience, but nevertheless claims that his films have inspired people to build their bodies and become more fit. Like a YMCA with real-life punchbags.

Some Asian governments, perhaps believing only in State-operated violence, have chopped some of the best chops out of many Shaw spectacles, or even banned them altogether. But the studios have managed to please them with a series about a mindless mandarin called Mr Bumpkin, who comes to their own marvellous modern world from the People's Republic of China — depicted as semi-state age.

Although some Shaw epics look as though they weren't so much released as escaped, the studios begin more like the real thing these days. Peter

Cushing was there a year or two ago to make "Seven Golden Vampires", and there are perpetual rumours that Steve McQueen or Paul Newman may be on their way soon. The studios boast 400 self-contained staff apartments, a staff of more than 1500 and an air-conditioned wardrobe unit with precious garments from all dynasties — bought for a song from the refugees.

Even the professional temperament is there. The day I was visiting, a director had thumped a member of the camera crew. No-one knows for certain whether the studios are a central interest, or merely a sideline, for Run Run Shaw, who is reputed to be one of the world's 10 richest men. After all, he's no more a movie mogul than a hotelier, financier, banker, insurance operator, amusement park proprietor or real estate director. In the flick world of films, it's also to have security, and in the countries where he's most influential no one doubts that there's no business like Shaw's business.



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Shaw is it!

To grow or not to grow: is that the question?

by J V White

IN 1899, Peter Propotkin published a series of articles in book form, entitled *Limits, Factories and Workshops Tomorrow*, which extolled the advantages of small industry and communal farm production.

It was more than 50 years later that Dr Ed Schumacher published *Small is Beautiful*. In 1972, the Club of Rome issued *Limits to Growth*, the first of three books which embodied, in a more sophisticated form, the philosophy of Thomas Malthus whose essay on population first appeared in 1798.

Not so long ago, the chairman of the Commission for the Future there in New Zealand issued a warning about the likely effects of electronic automation on employment.

Propotkin, an aristocratic refugee from Tsarist Russia, who lived mainly in Britain, was an anarchist, one of those who thinks governments, all governments, and sometimes

expresses that dislike by throwing or planting bombs. Propotkin was not the bomb-throwing type of anarchist. He was a keen student of economics and politics, who became critical of prevailing economic theories such as the International Division of Labour under which British low-cost, high-quality manufactures were exchanged for low-cost foodstuffs and raw materials mainly from America and what became the British Dominions.

He abhorred the conditions in the factories and mines, and deplored the decline of British farming. Almost the main theme of *Limits, Factories and Workshops* was that Britain could become self-sufficient in food, in which case the dark satanic mills would

no longer be needed; nor would large cities growing ever larger and more soul-less and more difficult to manage. He also stressed that the New World countries would develop their own industries to meet their requirements of manufactured goods.

Propotkin does not specifically name pollution as a drawback to economic growth. The motorcar scarcely existed, but there were tens of thousands of horses in cities, and the main source of heating and power was the burning of coal so that pre World War I cities were more polluted than they are today.

Dr Schumacher, who, somewhat ironically, was economist to the British Coal Board, was one of the first to express doubts about expanding economies and large-scale industry, particularly centralisation of industry in large, ever-growing cities. He had doubts about the economies-of-scale argument, although it is of interest, in retrospect, to note that countries such as Western Germany which adopted American industrial techniques are the ones with highest rates of economic growth and, in consequence, better welfare systems and with more resources available for cultural development.

The environment

It is not easy to pinpoint a time when environmental considerations assume major significance in policy determination. Certainly, the smoke pollution problem in London was tackled and solved many years ago. But the environmental lobby has many new faces, and environmentalists cover a broad spectrum both in the number of facets of the problem they attempt to deal

with, and the intensity of feeling displayed.

There is, for example, a wide gap between those environmentalists completely opposed to growth in almost any form who consistently refuse to face simple facts, and the many sincere people who realise that growth is necessary but hope that it can be achieved with a minimum of damage to what they see as the natural environment. Others do not have any philosophical objection to the good life but consider that the world is rapidly running out of resources and that the use of remaining resources must be drastically reduced.

Others are more concerned with what they see as the problem of too large a share of the world's resources being used by a relatively small proportion of the global population in the few richer countries, and they want the rich to give more to the poorer countries.

Club of Rome

This is where the Club of Rome came in. Its first work was *Limits to Growth*. This was based on results from a computer model constructed by a group in the Massachusetts Institute of Technology, and presented a disturbing picture of a world running out of resources at a rapid rate. Now pretty much discredited, the book had considerable impact at the time. Its general theme, if not the detail, is built into the conscious and subconscious of the more extreme environmentalists. It was the sort of message many had been waiting for.

The fact that a computer had been used impressed many who seemed to have the idea that in some arcane fashion the computer had done the job itself.

The Club of Rome has produced two more books, *Mankind at the Turning Point*, which develops further the theme of *Limits to Growth*, and *Reconstructing the International Order*, which concedes that *Limits to Growth* "over-dramatised the situation", a euphemism for a work which attempted to produce firm, even dogmatic, conclusions from slender evidence.

Restructuring the International Order is concerned more with ways of aiding the development of Third World countries, but unfortunately lays almost total stress on the developed world sharing its wealth with the poorer countries. Such a policy has strong emotional appeal and is predictable from a body such as the World Council of Churches, or the now almost totally politically motivated United Nations General Assembly. The transfer of a significant proportion of the wealth of the developed world to Third World countries would be difficult to carry out in practical terms, but the benefit to developing countries would be limited and brief, and in the longer term, would undercut their real chances of development.

Everyone may not agree, but the point is that such arguments lose sight of the real issue — what is the true position regarding world resources? Clearly, if vital resources such as energy and food potential are circumscribed by sheer physical shortage, then the argument for more equitable use of those limited resources gains validity.

It would, of course, involve some sort of World Government, which would also have to take steps to curb rates of population increase. Such a

body would have to be completely authoritarian, with powers to impose and monitor a wide range of sanctions, supported if necessary by force. But such a body would not work. Most of its resources would be absorbed in putting down "rebellions" and dealing with appeals and protests, and, being composed of ordinary mortals, would be no

could be lower or higher — even the lowest likely figure will be vastly higher than today's level.

It may seem unrealistic to look 200 years ahead, but the Institute was not forecasting. It has assessed the physical scope of world resources and, taking account of problems, has assessed what is physically possible in the light

implications for just about every aspect of human thinking — political, economic, social, even spiritual. For example, a world where population has seriously outrun physical resources demands a different type of political and economic system from one where resources are adequate.

We now have a situation where:

1. Resources are adequate to provide, on the basis of present knowledge, high living standards for population of up to 20 or 25 billion;
2. To keep population down to this apparently high level will require considerable effort, both nationally and internationally, and some fairly drastic changes in thinking especially in some religious thinking;
3. The attainment of the sorts of growth levels envisaged will require considerable effort not only in terms of physical and human investment, but even more in changes in thinking.

In a world where the quantum of wealth is limited, even declining, philosophies which emphasise redistribution of wealth have logical and humanitarian appeal. But in a world with adequate physical resources, emphasis on re-distribution will hinder development as well as being in conflict with human rights.

Thus, the background to future political line-ups is likely to be much more complicated than in the past, where a two-party system has operated a "have" versus "have-nots" exercise. In future, groupings could become much more complicated and one can imagine something like the following:

- (a) Those who, accepting the availability of resources, maintain that development can be most rapid and most effective by giving industry and enterprise a reasonable share of the fruits of their enterprise and labours. Even though this will result in some inequality of incomes, even the lower ones would be much higher than under any other system;
- (b) Those who, accepting the availability of resources and the technical capacity for development, consider that this can be achieved most effectively, and most equitably, by governments' owning resources and industry and directing what should be produced, how much, and where people should work;
- (c) Those who accept the availability of resources thesis, but do not consider that development is in the interests of mankind. For example, we would have those who consider that while the development is technically possible, changes to the environment will outweigh the benefits. Opposing them would be those who accept that development is possible without serious net damage to the environment, even though there must be changes, but who consider that economic growth will not make people happier and that we should all be doing our own thing, which would mean that the ideal society would be predominantly rural with very simple living standards.

Few people want this, and few of those who say they do would face up to it in practice; which is just as well as it would be quite impracticable in most countries.

The fourth item of the brief chronology with which I began this article referred to a statement by the chairman of the Commission for the Future, regarding likely

increased unemployment through electronic mechanisation. What is the connection between this and problems of world resources? Only that one of the future problems will be how to make use of increased leisure.

In the past, mechanisation does not seem to have been a major cause of unemployment. As incomes have increased, a larger proportion of the work force has become absorbed in servicing industries — now some 75 per cent in America.

Nevertheless, filling in non-working time will present difficulties to many people, and emphasises the need for facilities for training for leisure as well as for work. Increased leisure may take the form of shorter working hours or earlier retirement or both. But relative to the major difficulties of the future, use of increased leisure hours or years should not loom too largely.

The three major areas of concern seem likely to be:

1. The battle-ground of "haves" versus "have-nots", both within countries and between nations. It is, though, a conflict which will diminish as real incomes grow;

2. How to curb rates of population growth to stabilise population numbers at levels compatible with available resources and with reasonable standards of physical and psychological comfort; sufficient open spaces to be able to get away from each other;

3. The excessive enthusiasm of environmentalists who, in democratic countries, are beginning to wield power out of proportion to the validity or significance of the causes they argue. This is likely to give countries with authoritarian regimes considerable advantage over democracies, but maybe this is what at least some of the environmentalists want.

Implications for New Zealand

The question of which is right, the growth school or no-growth school, has great implications for this country. We depend on exports, and a large proportion of those exports will find markets only in countries with high, or relatively high, living standards. This is true not only of our traditional products, but even more so of many non-traditional products now being developed.

We cannot foresee, with any precision, whether world economies will grow or at what rate... neither the Planning Council nor the Commission for the Future can tell us that.

But, in an address to the Institute of Agricultural Science recently, Dr E M Ojala, a New Zealand economist who for years held one of the top positions with the Food and Agriculture Organisation, indicated that preliminary findings from the recent work of FAO suggested that we should not have any insuperable difficulties in finding markets.

This would be in line with the Edison Institute's report, and the longer-term projections of Herman Kahn. Let's hope that the Planning Council soon gets stuck in to the preparation of a programme for development which will take advantage of the opportunities and so safeguard our future. At present, the council seems rather like Hamlet's native land of resolution.

"Sickled off with the pale cast of thought, And enterprises of great pith and moment, With this regard their currents turn awry, And lose the name of action."

FM band cash in RT makers' coffers

by John Gaines

ALTHOUGH FM broadcasting hasn't begun in New Zealand, some in the radio trade are already making a profit from it.

Perhaps the New Zealand Post Office made a mistake in the late 1940s when land mobile services were put into a section of the radio spectrum which had been reserved overseas for FM broadcasting.

But it now means cash in the coffers of radiotelephone manufacturers who are selling new equipment to users. They have tapped a market which would not have been there, except for a change in spectrum planning.

An FM Advisory Committee was established under the chairmanship of the Broadcasting Council of New Zealand with members from the BCNZ, Radio New Zealand, the New Zealand Post Office and the Federation of Independent Commercial Broadcasters. This committee set up a technical sub-committee to establish the

criteria based on world recommendations for the planned introduction of an FM broadcasting service, and in particular the frequency planning as this affected other Very High Frequency services. The delay is in the publication of the report.

There are probably tens of thousands of FM receivers in the country, brought in by tourists, but they can listen to only taxis and trucks.

Various groups in New Zealand have expressed interest in FM. A pirate FM broadcasting station operated in 1977 in Auckland until radio inspectors closed it down, and an organisation in Newlands, a suburb of Wellington, has an FM broadcasting society. It built a transmitter, but has been unable to get a licence.

It is easier to set up an FM station than an AM station — transmitters are smaller, and there is no requirement for an elaborate aerial mast and earth mat on some remote site on the edge of the city. Capital investment can be low; an FM station can be run on a shoestring.



THE MEDIA

In the United States, FM was originally tied to the youth and ghetto communities, and the stations there supported community issues far more than AM stations.

The introduction of FM to the United States, where it was invented, was not smooth. Depending on the books you read, it is said that it was suppressed by the RCA Company in the 1930s and again in the 1940s to enable the introduction of television, which would provide larger profits. As a result, FM didn't really get going until the 1960s.

FM was largely invented by Edwin Armstrong, who was involved with RCA as an inventor of various circuit devices which it used. He came

up with the process of modulating the frequency of radio waves, hence Frequency Modulation, as against the modulating of the amplitude (Amplitude Modulation). This was in 1923 when he was working at Columbia University. In 1924, RCA allowed Armstrong to use the Empire State Building for transmission, the top of which was a mast for radio transmissions of many kinds.

In those days, RCA was not interested in FM, and in 1935 it asked Armstrong to leave the building, and shortly afterwards announced a \$12 million corporate commitment to research and develop television.

In 1936, Armstrong went to the Federal Communications Commission asking for spectrum space for FM transmission, and was ruled against. But in 1939, he got channel one of the American TV band allocated to FM transmission. He contracted General Electric to build 25 FM receivers for demonstration purposes. Then such companies as Stromberg-Carlson, Western Electric and Zenith started making them.

The first scheduled broadcast by FM was in July 1939 from Armstrong's

transmitter, using the call sign W2XMN, in Alpine New Jersey.

After World War II, there was an attempt to move FM up on to the ultra high frequencies and its future didn't look bright. In the first nine months of 1946, only 80,000 FM radio receivers were produced, compared to 6.5 million new AM radios.

Armstrong sued RCA in 1948 for using his FM devices in its television sets — even in New Zealand TV sound is FM — and in despair committed suicide by walking out of the thirteenth storey window of his apartment. A few months later, RCA settled with his widow for \$1 million and unlimited reproduction rights on patents.

There's nothing magical about FM as such; AM would work just as well on the frequencies where FM stations do operate — perhaps better, in the opinion of some New Zealand radio engineers. Our communications services operating in the land mobile service use AM. Overseas, on similar frequencies, FM is usual.

Roughly 88 to 108 MHz is now considered to be FM broadcasting territory, but in New Zealand the band 94 to 108 MHz

is used by land mobile services.

The NZPO commenced its land mobile services in 1948 and presumably the PO wasn't aware of the battle between RCA and Armstrong for the spectrum space around 100 MHz.

So the PO has to shift the land mobile services currently operating in the lower half of the 94 MHz to 108 MHz band, to the consternation of many users.

The move out of this section of the spectrum will be done in an orderly fashion as existing land mobile equipment reaches the end of its economic life — at least that's how the Post Office has planned it. It has said in letters to subscribers over the past few years.

So when will FM arrive? In June 1978, the Minister of Broadcasting, Hugh Templeton, said that no Government decision on FM broadcasts in New Zealand was expected that year.

"The various considerations surrounding the introduction of FM broadcasting to this country are still being examined by an FM planning committee which is representative of the various interests concerned."

Exchange rates

As at 18th January 1978 \$1NZ is worth:

Australia	9258	Malaysia	2.3137
Britain	5295	Netherlands	2.0887
Canada	1.2547	New Caledonia	
Fiji	8669	and Tahiti	80.75
Japan	206.08	Norway	5.3041
West Germany	1.9353	Pakistan	10.37
USA	1.0541	Papua-New Guinea	727.3
Austria	14.15	Portugal	49.00
Belgium	30.48	Singapore	2.2732
China	1.6694	South Africa	9134
Denmark	5.3720	Spain	73.22
France	4.4419	Sri Lanka	15.93
Greece	37.80	Sweden	4.5516
Hong Kong	5.0036	Switzerland	1.7506
India	8.5527	Western Samoa	752.1
Italy	874.30	Selling rates supplied by CBA Bank	

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Don't keep all development risks to yourself

It is well known that product or process development is a risky business. Big money can be at stake for long periods before the product reaches a marketable stage and you see a return on your investment.

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The answer is not to try and go it alone. The Applied Technology Programme, administered by the Development Finance Corporation (DFC), is designed to help out in this area.

Risk capital is available for approved projects, thereby sharing the financial risk involved during the difficult development stages.

Return of DFC's investment is simply related to the degree of risk involved.

DFC realises its return on the investment only when the project begins to generate sales.

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Jakarta 3 times per week. There are daily trans-Tasman flights that enable you to connect with all these flights. And others.

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SPTV's 1979 advertising approach

SOUTH PACIFIC TV will introduce a new six-line rate card this year, which will replace the present three-line card.

The new rates will become effective on March 5.

SPTV sales and marketing director Maurice Ulrich said he had two objectives in introducing the new system: to introduce rates that were cost effective as far as the national advertiser was concerned by giving the media buyer a greater range of options; to consolidate and develop SPTV's regional ad selling.

Advertising rates have also gone up. For example, the present 30-second programme national slot costing \$1040 will go up to \$1080 — an increase of 4.8 per cent.

The increased rates were approved by Trade and Industry late last year.

SPTV will increase its coverage from 85 per cent to more than 90 per cent of the country by mid summer, with a new translator which will add close to 80,000 people to SPTV's viewing audience.

SPTV will put the greatest emphasis on selling regional ads. About 35 per cent of its current revenue comes from this source, Ulrich said he would like to see the figure increase to 40 per cent.

The new rate structure gives 3 minutes per hour to regional ads over four commercial days and the balance (6 to 7 minutes) to national advertising.

Ulrich said he was considering increasing the regional ad time to 4 minutes an hour.

From March, Saturdays will be reserved for network advertising.

While SPTV's retail ad sales have been good in Auckland, the channel has received poor support from the rest of the country.

The answer, said Ulrich, lay in winning support from the advertising agencies. He said he had no desire to compete with private enterprise, either in advertising sales or production. SPTV would perform these functions only where private enterprise did not provide the service, he said.

The bulk of SPTV's Auckland regional advertising came from agencies, he said. SPTV, like other electronic media, has an advantage because, unlike newspapers, it gives the agencies a 20 per cent commission for placing retail advertising.

Outside Auckland, the agencies do not push SPTV. Ulrich said that in Christchurch 50 per cent of SPTV's retail ads are sold through agencies and 50 per cent by SPTV's own salesmen.

In Wellington and Dunedin, agency support for SPTV is virtually nil. So, Ulrich said, he would reallocate his sales staff to give greater sales strength to areas outside Auckland — and particularly to Wellington.

SPTV is also establishing a sixth sales region based at Palmerston North. Originally the Palmerston North advertisements will be broadcast as part of the Greenbelt (Waikato, Bay of Plenty, King Country, Hawke's Bay) region. But Ulrich said he hoped for a split transmission to create a new regional broadcasting area.

BGH moves north

BRUNTON Gestro Horne Marketing Ltd has moved its head office from Hamilton to



ADMARK

Auckland.

Three of the four directors, Graeme Horne, Colin Gestro and Jim Little, have set up shop in Symonds Street.

The fourth director, Tom Short, has stayed behind in Hamilton, maintaining a service office there with two other staff.

The Auckland operation was previously a service office in Liverpool Street, run by a staff of five. The directors are keeping quiet about what the 18-strong staff they anticipate having in Auckland will be doing. Or more precisely, who they'll be doing it for.

"Basically there's more business in Auckland," said Little.

He agreed there was already an abundance of agencies in Auckland, but "we are quite sure there is room for us".

Little wouldn't comment on what new business for BGH had been picked up to justify the agency's considerable expansion. But he did say BGH had doubled its turnover in the last 12 months. "And we weren't starting from a tiny base either," he said.

BGH was established in Hamilton 10 years ago. It was one of four agencies in the city, only two of which had accreditation, including BGH.

Women give thumbs down

WOMEN'S WEAR — INL's attempt to enter the women's market — died after only seven issues. The whole episode leaves unanswered the question as to whether there is scope for another New Zealand women's publication.

In the last five years Eve, Thursday, NZ Woman, Family Circle and the newstand editions of Apparel have also ceased; at least one major project was stillborn; and all that survive on the newsstands are Woman's Weekly, occasional issues of City Girl, and the monthly radical-feminist Broadsheet.

INL's attempt — a formula acknowledged at the end to be wrong — was a 40,000-print weekly tabloid, black except for a spot-colour front, selling in the North Island only.

The marketing idea behind this was never clear. If it was to tap the boutique and fashion market, a base in Hamilton and features on Marilyn Waring, Allister Taylor, and Raewyn Beatham seemed unlikely to help.

In Australia and the United States, tabloids have enabled publishers to make low-cost breaks into markets — but it is doubtful that they suit the women's field. Marketing to women needs a quality print format — or at least excellent four-colour printing. Women's Wear, though carefully laid out to a magazine-style system, had neither to offer — and thus had no advertisers either.

But it is understood that it was not so much the advertising failure which brought the paper's early death, as signs that a circulation rise was impossible. The paper depended on selling 25,000 copies per week at 80 cents per copy. Not only did early issues not reach this target, but with each issue a rising number of outlets indicated they did not wish to

stock the paper.

This retailer reaction, of course, was a reflection of the public's reaction; but it meant that the paper's prospects of breaking out of the low sales-no advertising cycle were quickly extinguished.

The concept of a paper which began as a weekly seems to be wrong. At no stage did Women's Wear show that it had anything to say which needed such frequency of publication; while the 50 cent per copy price meant that regular purchasing was unlikely. Despite its access to overseas material, notably from Women's Wear Daily, the paper failed to become a substitute for overseas magazines, yet did not become a New Zealand fashion magazine either. The few New Zealand fashions which were included were not accompanied by any indication of where they might be bought.

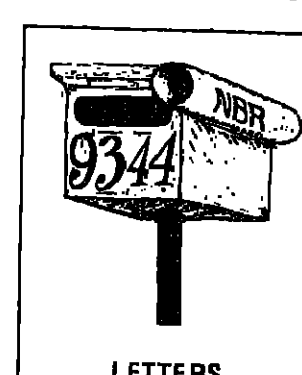
Normally, the sight of a large newspaper group financing an experimental publication would be welcome in New Zealand. In the present instance, however, the exercise reveals that INL has little understanding of the women's market.

Economic thinking

REG BIRCHFIELD in Soapbox makes the very error which prevents the political parties from carrying out their repeated promises to give the dollar stable purchasing power. That error is so deeply embedded in the whole thought structure of our culture that it is incorporated into language itself.

That failure to think clearly is expressed in the whole complex of ideas which assumes that there is a quantity of money in existence which is independent from the total of incomes. It is reflected in the learned arguments of academic economists as to just what constitutes MONEY, M1, M2, etc., which are supposed to be the elements of "the quantity of money".

Current earning efforts are the energy which generate the current stream of goods and services which are being produced. The right to take part of that stream is given by income. The goods and ser-



LETTERS

do the impossible.

Not only is the whole economic thought structure astray from reality, but those ideas are embodied in monetary, fiscal, financial and accounting practices. World wide inflation and the erosion of the purchasing power of the dollar, franc, mark, yen, etc. is going to get worse and keep on getting worse for a very long time.

Politicians cannot keep their promises to fight inflation and reduce the shrinkage of the size of money units. The hardships of unemployment, the loss of savings and the general maladjustments of stagflation will persist for a long while. Changing ideas and practices which are incorporated into world culture will be a slow process.

The great need to think again opens tremendous opportunities for those with the imagination, energy and courage to lead. That will require a different breed of politicians than those now governing New Zealand.

John R Perkins,
Tauranga.

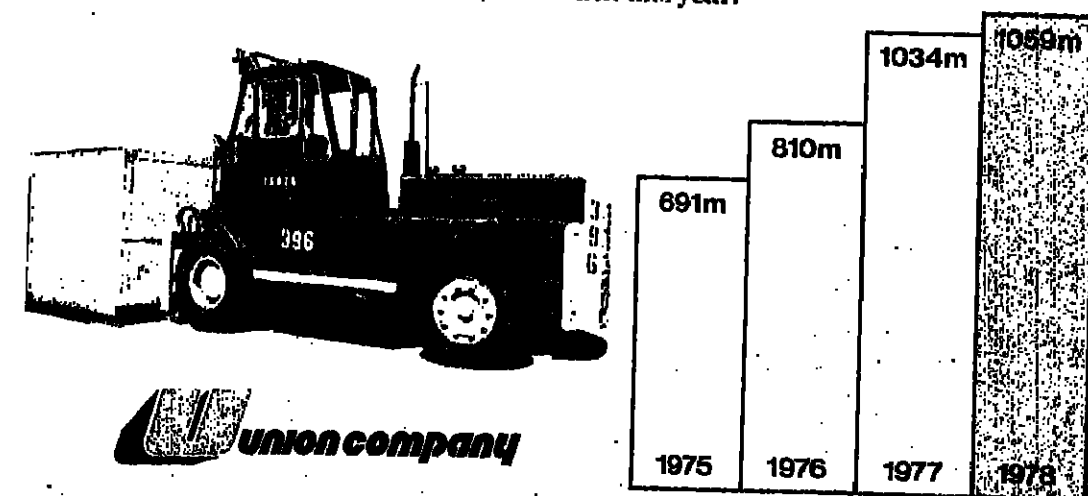
Just for the record we helped you make a Billion Dollars last year

When the figures were all in for the year ending June 1978, trans-Tasman trade was found to be worth a record one billion and fifty nine million dollars.

Of this, Union Company vessels carried just over \$770m.

Operating continuously between Australia and New Zealand, Union Company's fleet of modern roll-on, roll-off vessels delivered more than a million tonnes of manufactured goods, raw materials and a wide range of other products safely and swiftly, making a major contribution to total trade.

The big question now is, how much this year?



union company



every day one of our ships is in one of your markets.

Talk trans-Tasman trade with Union Company.

New Zealand Branches: Auckland 774-730, Tauranga 53-199, Wellington 729-699, Nelson 81-459, Lyttelton 71-49, Dunedin 77-201, Adelaide 47-1633, Fremantle 35-1091.

WINE DRINKERS: which NZ wine co. won the most medals for its table wines in 1978?

Villa Maria. If this surprises you read on.

RESEARCH RECENTLY CONDUCTED REVEALED THAT FEW TABLE WINE DRINKERS ARE AWARE THAT VILLA MARIA IS A CONSISTENT PRODUCER OF TOP QUALITY WINES. THAT'S OUR FAULT FOR NOT LETTING YOU KNOW. WE HOPE TO RECTIFY THAT PROBLEM WITH THESE FACTS

The surprising facts are:

1. Villa Maria won a total of 46 Medals in the two competitions in 1978 - the Easter Show in March and the THC competition in November. These medals were awarded to a total of 35 of our wines (some wines won medals in both shows).
2. Though we won the most medals for table wines one other company equalled Villa Maria's 46 medals; no one surpassed this total, however.
3. One major wine company did not compete in the Easter Show. Even if it had (and even assuming they had done well) the fact remains that Villa Maria wines performed exceptionally well.
4. Villa Maria's 1978 performance is a culmination of an increasing domination of medals over the past three years indicating a consistency of quality. For example, our wines won a total of 37 medals in the two 1977 shows.

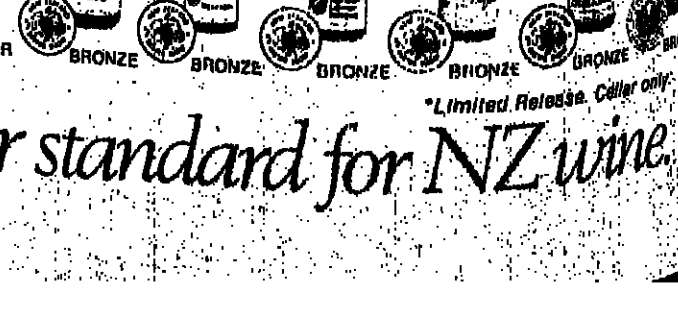
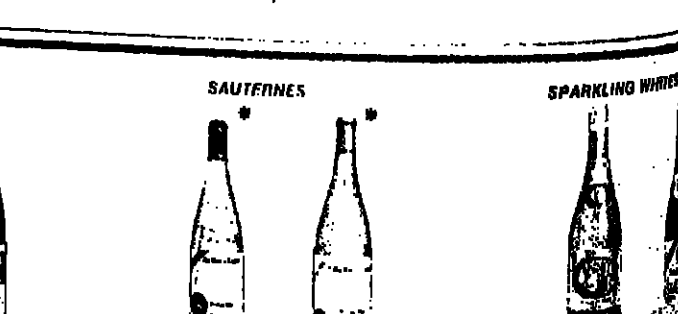


What does this mean to you?

Medals aren't everything, of course, but they do provide a valuable service for wine drinkers who like to experiment but who don't appreciate bad surprise. Medals winning wines are a safe bet to buy because independent, highly critical, and awarding experts have assessed them as attaining a standard of excellence. You may not always like medal winning wines, but the chances are you will.

As medals are a reliable guide to quality, we at Villa Maria mean to try our wines over our medal winning performance in a recent year. As New Zealand Listener Staff writer Peter Trevelyan writes (November 23, 1978): "But it's not just at quantity that Villa Maria's success is evident. It has been timing, like most of the leading wine makers, he recognises that the New Zealand public is fast becoming more discerning in its taste. In the past four years his wines have won an impressive array of awards, including six of the nine silver medals awarded for commercial quality wines at this year's Easter Show."

This is only one of the highly favourable comments, by wine experts throughout New Zealand, but we think we've given you enough facts to see which ones you'd like to try.



Villa Maria~ setting a higher standard for NZ wine.

Reaping profits from the field of data-logging

by Allan Parker

THE major trend in industrial production - and, to a lesser degree, in commercial use - throughout the 1980s will be the application of computer technology.

If New Zealand industry is to remain competitive and sophisticated, it will need to invest increasing amounts of capital to provide computer systems for its production and back-up services.

Of course, computers are not new to New Zealand; many companies have already established computer-run technology in factories and warehouses. Numerically-controlled machine tools, for example, are becoming if not common-place, more obvious.

New Zealand relies heavily on imported technology to upgrade and modernise. Millions of dollars a year are spent importing this equipment.

But now a small New Zealand company is attempting to build a base of knowledge and experience in making computer systems locally.

And, remarkably, only 10 per cent of the value of the equipment being made is imported.

The company is Solid State Equipment Ltd, and operates from the bottom of the Waiwatu Hill in Wellington's Hutt Valley.

The computer systems it is making offer a number of valuable services for researchers in the field of data logging and increasingly, in industrial applications.

Solid State was formed in 1971 by two former DSIR "boffins" who worked in the Physics and Engineering Laboratory at Gracefield. George Jones was an electronics scientist, and Neil Poletti an electronics technician.

But the roots of the company go back to 1967, when the two men worked evenings to build navigation lights for harbours. These proved successful enough to launch the full-time company.

Later products included emergency lighting systems for buildings.

"They were," says Jones, "standard electronics products which allowed us to

build up the company."

And they allowed Jones and Poletti to move into the then-infant world of the micro-processor - those tiny bits of silicon chip which are the controlling element of tomorrow's computers.

These remarkable silicon chips are so small that two or three will fit onto a fingernail. Yet, for example, the micro-processors that Jones and Poletti work with contain up to 16,000 transistors.

Recalls Jones: "Micro-processors were a very young industry then - not just in New Zealand but throughout the world."

"We decided that this was the way the electronics industry must go and we had to go with it."

The approach was from the ground up. Rather than import completely built-up printed

circuits, the company has insisted on building up its own printed circuitry for use in the computer systems.

In many ways, it's a classic example of New Zealand adaptability and ingenuity, except in this case it's dealing with the most sophisticated technology available.

For instance, the boards upon which the printed circuits are built are imported. Certain electronic components, too, are imported, such as the microprocessor itself.

But that's the extent of the imported content. The company designs its own printed circuits for specific applications and then constructs the printed circuit which will control the system using the same photo-process system that is used overseas to manufacture the microprocessors.

Without the airline can really pull something out of the bag, an all-year-round excursion fare of about \$1000 to London and Europe would be the same or cheaper as far as the New Zealand traveller is concerned.

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The frames into which these printed circuit cards are slotted are manufactured in New Zealand, as are the protective coverings.

The designers have added a few touches of their own to enhance the system's performance.

For example, they have designed their base model - a data logging system - with a low power consumption so that it will run on batteries for a lengthy period.

And they found that improved technology in the componentry - plus some design additions - allows their equipment to be used in conditions not normally associated with sophisticated computer systems.

The Solid State systems can be left outside in most weather conditions.

Another refinement is the use of cassette tapes to record the information being gathered by the system. The tape is then removed and run through another system to retrieve the information.

The application of these three factors allows their mini-computer systems (one so small it looks like a lunch-box) to be left on a mountain top for a month recording rainfall data. The cassette tape is then collected and taken away for the information to be retrieved. The batteries and tape are replaced and the equipment left standing for another month.

Jones reports that a staff member recently visited a major computer exhibition in the United States but could find no product with a similar capability.

This field of information logging has been the major area in which the systems have so far been used. But industrial applications are assuming greater importance.

Specific examples being investigated by the company now:

• A system to take information from factory machines and log the rotation of machines. This is designed to provide information for a company's bonus incentive scheme and to pinpoint areas of waste;

• A mechanical workshop wants information about what machines are working on what jobs for how long. The information gained will help the company's job-costing;

• A consultancy is interested in finding out the efficiency of lifts and escalators in buildings. By clipping one of the Solid State computer systems to a lift, the efficiency can be measured;

• A company wants to establish a microwave link between two stations. By logging readings 170 times a second for some months, a Solid State mini-computer can help decide the best approach.

Jones is particularly interested in moving into a new field - radio links.

For example, a data logger could be left in a forest programmed to record temperature, wind speed and direction, humidity and rainfall. It could be connected to a radio transmitter which could then radio the information into a central control which could analyse forest fire danger.

"New Zealand is particularly good in the field of radio communications, and we now have this 'computer system' technology," says Jones.

"This could well be a way of combining two apparently separate technologies."

The entire operation, nearly failed to get underway.

The company poured some



"Lunch-box" mini-computer system.

\$100,000 into developing the technology, sustained by its other products.

But, with the decline in the economy, demand for the company's "bread and butter" products dropped.

"We were doing the R & D cheaply because we are a small company. But that \$100,000 was still a heavy investment."

But the company approached the Applied Technology Programme of the Development Finance Corporation for assistance in continuing the research programme. Result: an injection of some \$30,000 to help carry the company through the recession.

The company - it now has a staff of 11 - has pioneered much of the work in New Zealand with this new technology and, while it is by no means in a position to tackle the computer giants, Jones

feels it has the capability to help New Zealand industry ease into the computer field.

The company's mini-computers are normally built to a specific customer's requirements and allow a "do it yourself" approach to computerising a production line. For instance, a company can start off in one particular area with a \$500 data logger and then build up its use of the computer systems as it becomes more confident and finds the use of the equipment time and money-saving.

The future, says Jones, is wide open.

"This is the way technology is going - and industry, too. We also have export potential. For example, our field data logger could be used in Australia out in the isolated mineral fields."

And, he believes, the commercial application has yet to be exploited.

one of the most important research papers ever released on New Zealand agriculture," that's how Harry Broad, editor of Straight Furrow describes The Future for New Zealand Agriculture.

In this significant new publication, Ian McLean, farmer and agricultural economist, explains why production rather than market problems inhibit agricultural exports. He probes the pros and cons of five alternative policy strategies to combat New Zealand's complex, persistent agricultural problems. McLean concludes that the weight of evidence supports one particular strategy.

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Pressure to prescribe plethora of preventatives

by Bellinda Gillespie

FIFTY years ago, penicillin was discovered, and the whole direction of medicine changed. An editorial in the New Zealand Medical Journal has drawn attention to this event, and the problems brought by "the seemingly endless plethora of useful antibiotics".

So much information is needed to make a correct decision, it suggested, "that proper choice may depend ultimately upon another technological triumph, that of the miniaturised computer with its data handling capabilities".

Not until the early 1940s was it confirmed that penicillin had powerful antibiotic properties. Before this was an era of what has been called "therapeutic nihilism", where there was widespread acceptance of the fact of disease and the risk of premature death.

It was a fact of life that people died of tuberculosis, pneumonia and meningitis. Tombstones of last century show that parents were resigned to the deaths of one or more children at an early age. In a matter of a few decades, thanks to antibiotics, many lethal infectious diseases have been controlled.

Having discovered one magic bullet, however, the public demanded more. If pneumonia and meningitis — why not cancer, heart disease, stroke, and the common cold? Our expectations have risen beyond the capacity of medicine to meet them. Simple technologies like immunisation and antibiotic drugs have not yet been discovered to prevent or cure the degenerative diseases which challenge the large population of middle-aged and elderly. A cure for the ubiquitous cold is equally elusive.

For many of the minor ailments which take people to their doctors, antibiotics are not an appropriate solution. But such is the pressure on the doctor to prescribe something — and so great the faith of the uninformed in the magic bullet — that a visit to the doctor is generally followed by a visit to the pharmacist.

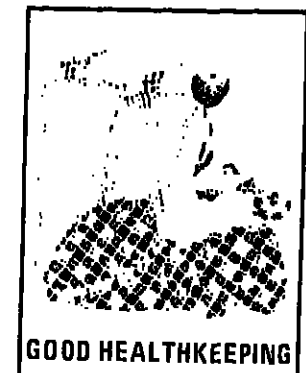
A general practitioner who has worked in the British National Health Service as well as in the New Zealand free enterprise system claims that the pressure to prescribe is greater here. Where someone pays several dollars for each visit, a doctor who doesn't prescribe feels that he has cheated his expectant patient, who as often as not asks outright for an antibiotic. In Britain, where return visits are free, the conscientious doctor can see a patient several times to check progress; here he could be accused of trying to generate income. Antibiotics, particularly for minor respiratory infections which make up a large proportion of patients' complaints, may stop complications developing, or may be of no use at all. But prescribing antibiotics makes the doctor feel better. It's a satisfactory way of terminating the interview with honour: if the drug does no good, it will do no harm either. Prescribing is quicker than a lengthy physical check or a long rambling chat about symptoms. The hard-pressed GP can shut through more patients this way — and, let's not be delicate, make a lot more money.

Not only does the consumer of medical services want antibiotics for every minor ailment, says a Wellington GP. He or she is under the illusion that if one doesn't work, another will — though ampicillin and tetracycline, which between them make up most of the antibiotic market,

are both broad-spectrum drugs which will "kill just about anything". Children's coughs, upon which antibiotics have little effect, are often treated with two or three drugs. When the cough dies a natural death, a cure is attributed to the most recent drug, which is demanded again when the cough recurs, as it so often does.

Another consumer myth is that one has been so drugged with a particular antibiotic, penicillin for example, in one's medical history, that it no longer has any effect. While strains of organisms may be penicillin resistant, an individual human being is not. Each new illness is caused by an invasion of bacteria with their own characteristics, penicillin-resistance being one possibility.

Professor Markham of the



National Health Institute says that the danger of treatment-resistant bacteria was known to the Oxford team working on penicillin back in the thirties, even before clinical trials had begun.

The more antibiotics are used, says Dr Markham, the greater the number of resistant organisms there will be. This means that in a hospital environment there will be more organisms resistant to a range of antibiotics than in the outside community. Resistant bacteria may also be created when antibiotics are used in a non-therapeutic way. Livestock kept in a confined space and given feed with antibiotics in it carry resistant organisms which can be transferred to humans.

Not only do organisms develop resistance — they can transfer this characteristic to other species in the environment. Markham says he feels that there is considerable over-use of antibiotics in the community, which is chiefly due to consumer pressure on doctors to prescribe. Drug companies have responded successfully to the challenge of resistant bacteria by continually modifying the chemical structure of antibiotics. The process is a wasteful one, with a built-in time lag.

Along with other microbiologists, Markham

says he feels that antibiotics should only be used where they are effective. They shouldn't be prescribed for colds, unless pneumonia is a complication, or for gastro-enteritis. Ideally, when they are used, the drug with the greatest specificity for the complaint should be the one chosen. This means pre-testing to identify the organism, almost impossible in an ordinary general practice situation, where the doctor may send off a swab, but "treat blind" while waiting for the results. "Treating blind" means using a broad-spectrum antibiotic, at least until the organism is identified, thus again increasing the chance of creating more drug-resistant bacteria.

Some antibiotics have side effects. The broad-spectrum ones most commonly prescribed in general practice wipe out the normal population of bugs in the gut, and can cause diarrhoea. Thrush is a common complaint among women who have taken antibiotics because of a similar effect on vaginal bacteria. More serious is the risk of deafness which is a side effect of streptomycin, a drug whose use is restricted to hospitals in this country. Tetracyclines can cause tooth staining in children, and doctors are discouraged from prescribing them to children under the age of 12. Allergy to

penicillin, the most widely used antibiotic of all, is not uncommon.

The benefits of antibiotics, however, clearly outweigh the small risks involved — if they are prescribed only when necessary, and taken according to doctors' instructions. That is, taken in the right dose for the full course, not just until symptoms disappear. Failure to finish a course makes a recurrence of the illness likely, and again increases the risk of developing drug-resistant strains of bacteria.

Medicines — excluding those dispensed in hospitals, for which no figures are available — cost the State \$98 million last year. Antibiotics, at \$15,500,000 make up 16 per cent of this figure, which includes the price of the drug, its container, and the dispensing fee. The broad-spectrum drugs, penicillins and tetracyclines, at a cost of \$8 million and \$2½ million respectively, make up most of this cost. The rest lies in relatively smaller quantities of a miscellany of antibiotics.

Michael Trow, the Health Department pharmacist who supplied these figures, feels that while there is some consumer failure to take drugs properly, as prescribed, over-prescription is the greatest problem, in both economic and health terms.

Computers and the communication gap

by Stephen Bell

NOWHERE in a company's structure, it seems, is there a bigger communications barrier than the one around that mysterious beast the computer and its attendant staff.

Complaints from both sides of the barrier are proverbial. Senior management and user departments accuse DP people of speaking jargon and of being more concerned with the technicalities of the machine than with the business problems they should be solving.

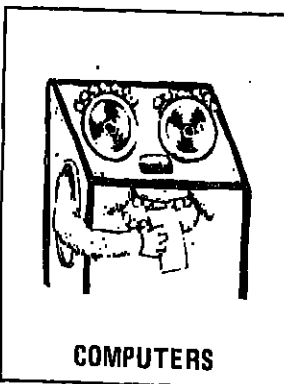
The DP people retort that management does not appreciate the costs and timescales of DP developments; when they use the computer, they expect instant solutions; often, they prefer to pretend that the DP department is not there and stick to their own manual procedures. As a rule, the grumbles go on separately on either side of the fence, with little profitable discussion of the problem. Last November, the Institute of Management and the NZ Computer Society attempted to promote some exchange of ideas with a joint seminar.

The event was generally acknowledged to have reaped benefits in a higher standard of discussion and considerable agreement on the nature of the major problems. In itself, it was a first step to better communication, but, as one of the principal speakers admitted to the NBR afterwards, the next step was difficult to see.

The well-known "jargon barrier" was agreed, was compounded by management's unwillingness to appear ignorant in the face of the DP specialist, whether it is the company's own DP manager, or a salesman from a computer company.

This drawback could be attacked on two fronts. Management must be prepared to admit the gaps in its knowledge, as well as repairing them through readily available educational services.

Jim Francis, general manager of Challenge



system, but there was no hesitation about giving the job to an inexperienced systems analyst.

Movement of staff between DP and business functions could, it is often suggested, be another means of diffusing expertise in both disciplines through the whole company. Studies claim to have found, however, that the psychology of DP and business staff differs markedly, discouraging such movement. In particular, it has been said, DP people lack the enthusiasm for social mixing which is an integral part of the business world.

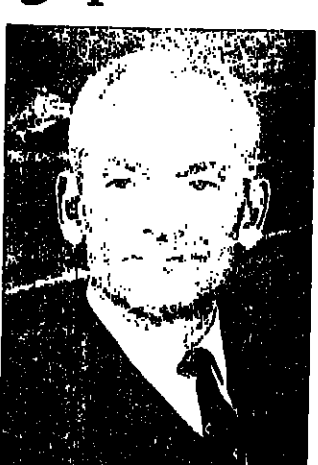
DP people, in common with many specialists, were disinclined to move out of their own field in any case, said Len Fahy, of the Accident Compensation Commission. He had met the same syndrome in other areas. "I know safety advisers whose one aim is to be a good safety adviser".

Accepting that for a long time there will be two separate fields of expertise, the logical strategy is to encourage and formalise co-operation, with joint committees from management and DP department to define and justify the computer systems needed, to work on their development and, an important point, to decide on abandonment of unsuccessful or out-of-date systems.

Inadequate co-operation, it was emphasised, leads to unwanted, badly-designed, inadequate and expensive systems, with delays in development.

Even in trying to promote co-operation, there exists not only the "jargon barrier" but some deep psychological obstacles. Bolton advanced the idea that a manager resented the stranger from the DP department trying to define approaches and criteria, which had previously been his province.

Information, and its possession, is an important factor in a manager's power, said Bolton. The computer system may require the manager to produce in-



JIM FRANCIS... provided lesson



LEN FAHY... DP people disinclined to move out of their field

formation which he has been withholding until the right moment for "political" purposes.

With such clearly-exposed obstacles, the efficient interworking of management and DP seems still to be some way off.

Delegates from both sides of the floor, however, were in no doubt as to the beneficial effects of a rapprochement. Computer-aided business planning opens the door to far more efficient planning and operation of a business, particularly in an uncertain economic climate.

Acceleration in motor accident costs

by John Sloan

THE Insurance Council of New Zealand has released statistics relating to the average costs of motor vehicle accidents in New Zealand.

Chart One details the average repair costs for private cars, business cars and trucks.

The figures are the amounts paid by tariff insurers, and do not include any claims excesses that may have been paid by the vehicle owners.

For many years, insurers have charged higher premiums for vehicles used in the Auckland and Wellington, areas and the chart reveals why — there is a higher repair cost there than for the rest of the country.

The Insurance Council figures indicate that since 1972 average repair costs have doubled — private cars from \$170 to \$342, and trucks and vans from \$181 to \$358.

Just as disturbing is the increasing frequency of accidents shown in Chart Two.

Between 1972 and 1978, the numbers of accidents to private cars and trucks has increased by 20 per cent, but for the same period accidents to business cars increased by 31 per cent. On average, half



the business cars on the road will have an accident, the cost of which will be about \$342.

The insurance council also estimated the total costs of motor accidents to the country. For the year ended March 31 1977, the total vehicle repair costs were estimated at \$73 million. Compounded at an annual rate of 15 per cent by 1979-80, the yearly cost will be running at approximately \$100 million. These all-up estimates are for direct costs to insurers only, without counting uninsured damage, claims excesses and the vast range of "hidden costs" incurred by businesses in loss of use, hire of replacement vehicles and so on. These unidentified indirect costs could equal the direct costs, so that by 1979-80 motor accidents could cost the country \$200 million.

Chart 1: Average Repair Costs in 1977

	Auckland & Wellington Area	Rest of North Is	South Is	N.Z. Average
Private Cars	\$381	\$54	\$119	\$352
Business Cars	\$353	\$45	\$302	\$342
Trucks & Vans				\$358

Chart 2: Number of Accidents per 10,000 Vehicles

	1977	1976	1972
Private Cars	2341	2243	1941
Business Cars	5385	4513	4100
Trucks and Vans	2647	2352	2206

THE REAL MULDOON

BY SPIRO ZAVOS

WHAT THE REVIEWERS ARE SAYING

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Royal visitor to New Zealand

A RECENT visitor to New Zealand was K M Bevins, chief general manager of the British-based Royal Insurance Group. The Royal is one of the largest international insurers, with \$5 billion in assets and a world-wide premium income of \$2.5 billion.

Bevins said his company is trading profitably in most areas of the world, but he expressed concern at the indiscriminate competition it is experiencing on an international scale.

He cited three reasons for the current cut-throat competition amongst insurers:

• Ignorance of basic insurance concepts;

• Fringe operators who quickly move into an apparent profitable market, slash premiums to an uneconomic level and pull out when the inevitable claims occur;

• The international aspirations of many third world countries and Middle East countries which insist on insurance being written in their countries, or are aggressively expanding



K M BEVINS...concern at discriminate competition.

overseas but buying business in the process.

Bevins said he hoped that sanity will prevail, and the current "soft" market will not permanently damage the insurance industry.

He gave instances of long-standing Royal clients being tempted by competitors' cheaper premiums, only to find the service was equally cheap; claims weren't paid, or

the insurers folded. The "once bitten twice shy" clients then returned to the Royal or other traditional insurers. Yet the Royal is not afraid of competition "as long as it's healthy and does not jeopardise the clients' interests".

While products liability was an international problem, especially in the United States, insurers had coped better than some sensational publicity had indicated, Bevins said.

The trend for multinationals to establish their own "captive" insurance companies is a fact of life, but much of the business flows back to the traditional market via reinsurance. Bevins predicted that the major international insurers would expand more into the reinsurance market, especially as capacity problems are emerging.

When asked about the burgeoning Middle East insurance market (where the New Zealand Insurance Group has announced a new joint venture) Bevins said that his company had been there a long

time, but was being cautious about expanding. The Middle East had potential for new or established insurers, but for those who rush in the results are likely to be chaotic.

Bevins was reluctant to comment authoritatively on the local scene, but he said he had detected a "soft" market, and from his international experience warned against the dangers.

Geoff Olsen, Royal's New Zealand manager, said that local competition is intensifying. There is an absence of corporate discipline, and in certain areas industry controls are proving inadequate.

Both Bevins and Olsen predicted the use of more sophisticated computers which would result in more efficient use of their resources, thus releasing staff for more rewarding duties.

Insurers must bring out new products, said Bevins, but he warned against introducing new types of contracts without researching the consumer's needs or the long-term results for the insurer.

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NBR BUSINESS WEEK

Another tough year for the NZ economy

by Peter V O'Brien

THE New Zealand economic problem is summed up in two sentences of the December Quarterly Predictions from the Institute of Economic Research: "But it is increasingly clear that not all major economic goals are achievable in the short term and policy depends less on traditional cyclical measures than on what specific objectives are sacrificed. In a very broad sense this entails a trade off between unemployment and the balance of payments."

The Institute says that

"Given these additional uncertainties, we have assumed that policy will be largely unchanged from the present stance".

That means New Zealand will continue to have a tough time in 1979. In addition, the Institute notes that it does not expect any major improvements in world trade.

Overseas views reinforce that opinion. While forecasters are notoriously in error about world predictions, particularly when they are unanimous in their recommendations, there is much evidence to show that the United States will have a

"mild" recession this year. It is expected in the second and third quarters of the year, when - according to figures from Data Resources Inc. (a highly respected forecasting organisation) - there will be a negative growth in real gross national product.

The figures were published recently in a London Financial Times article written by Paul Samuelson on the United States outlook for 1979. But Samuelson also considers that things will not be bad for long, because the 1980 election will be getting close, and the Carter Administration will be "shifting from fighting in-

flation to fighting recession" (a familiar ring to New Zealand ears?).

Since the Institute of Economic Research published its predictions in December, the OPEC group has lifted oil prices. The predictions said nothing about possible price rises for oil, so the analysis of the import-export situation may need revision on the basis of higher prices.

Speaking overall about the balance of payments, the Institute again hits on the trade-off situation: "The recent improvement in the balance of payments is almost totally the result of falling demand. This

improvement, however, is expected to end within the next six months, and a fairly rapid deterioration will ensue as import demand rises again to support a modest economic expansion."

NBR discussed this problem several times last year. The New Zealand economy is "lopsided", in that economic "stimulation" pushes up the import bill, with no noticeable change to export receipts, because the bulk of what we import is consumed locally, rather than being the subject of value added processing, and then exported. Add to that the problems of unemployment and inflation, and the dilemma is seen. Cut off one of the monster's three heads and the other two grow in size.

That is the reality behind the myths of economic wizardry, and it is a reality which demands more imagination than has so far been shown in tackling the country's problems.

The Institute has assumed no change in government policy when making its 1979-80 forecasts. "This could prove to be a somewhat unrealistic assumption as the elections take place after this issue goes to press". As this is an echo of the little argument between NBR and the Institute in 1978 about the effect of politics on economic decision making?

The nature of any policy changes is hard to assess. The rapid growth in money supply which has been apparent in recent months will have to slow down, whether by general forces or by new policies. In the year to March the overall growth in M3 should decline with the recent high level as taxes flow into the Government's purse, particularly from companies which no longer have the benefits of the stock allowance. But the growth rate in private sector credit has to come back rapidly if the "target" of between 10 and 15 per cent is to be reached by year end.

The Institute sums up the problem: "The severity of the recent recession has resulted in some easing of the rate of inflation, although the estimated domestic outlay deflator for 1978-79 is still in double figures. In the context of recent rapid expansion of the money supply, reduced stocks, and firmer consumption demand, this improvement will be difficult to sustain in the coming year, whatever policy course is chosen. In the final analysis, containing inflation may constitute the Government's greatest challenge."

Since the Institute is forecasting a 2 per cent growth in real gross domestic product, that the balance of payments deficit will rise to \$900 million, and that average domestic inflation will edge up to 12 per

cent following 11 per cent the previous year, it follows that "this improvement (inflation) will be difficult to sustain in the coming year".

Economic forecasters, of course, have an occupational hazard. Gloomy predictions may be seen by politicians as glimpses of reality, prompting them to adopt policies which nullify the forecasts.

Whether the Government has the will or the wit, in conjunction with its bureaucrats, to adopt such policies will be the economic question of 1979.

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Analysing annual accounts

by Peter V. O'Brien

NEW ZEALAND Cement Holdings Ltd has produced another informative report, which provides most of the information needed by users of accounts.

The 1977-78 year was not a pretty sight for cement companies, which suffered from the substantial downturn in housebuilding and commercial construction. NZ Cement has reported fairly well on the events, and its figures are reasonable, with

two exceptions.

The company fails to report its expenses, giving a figure for turnover, a group trading profit, and the usual rundown of statute-required information. Detail on taxation is also sketchy.

It is possible to assess expenses by deducting group trading profit from turnover, but that tells the reader of the report only a global figure. The company refers in the text of the report to increased costs, which allowed a price increase by the "Price Control

Authorities", but says nothing about the breakdown of those costs. Production of this information is important, because, as said here on many occasions, secrecy creates suspicion and misinformation about a company's activities.

The information on taxation is less than adequate. The company has the following note in the accounts: "Investment Allowances, Export Incentives and other deductible items are in excess of profits and consequently there is no liability for taxation on

profits of the parent company and its wholly owned subsidiary."

What were those allowances and deductions? What were the export incentives? In particular, how much did the company benefit from the stock adjustment allowance, if at all? What is the carry forward amount of tax concessions, if any? These questions should be available in the accounts of a company like NZ Cement, because it is impossible to assess the group's financial situation without them.

Reverting to the expenses question, it should be noted that a company does itself a disservice when it declines to publish such information. The accounts of a major public company these days have to note the political (in the broad sense) environment in which commerce operates. It is no longer possible to follow the philosophy of the "tell 'em nothing" school.

For example, sales declined 2.8 per cent on the year, which is probably a much more substantial amount in real terms, after taking into account price increases and the effects of a 15.5 per cent drop in the cement tonnage sold.

But group trading profit, at \$7,683,112, was 19.3 per cent below the previous year, suggesting that cost rises were an additional drag on profits, apart from the slump in tonnage sales.



NZ CEMENT ... financially strong.

The group does advise a figure for "general administration", which is deducted from "total trading profits". That amount jumped 21 per cent last year.

A breakdown of what happened to the expenses would tell people more about trading over the year, and assist in general understanding of the company's profitability problems.

Explanations of balance sheet changes are better than the information in the profit and loss account, suggesting that the company can provide the appropriate statements when it feels inclined.

NZ Cement tells shareholders what happened to stock levels, alterations to bank overdraft, and changes to debtors' figures. This in-

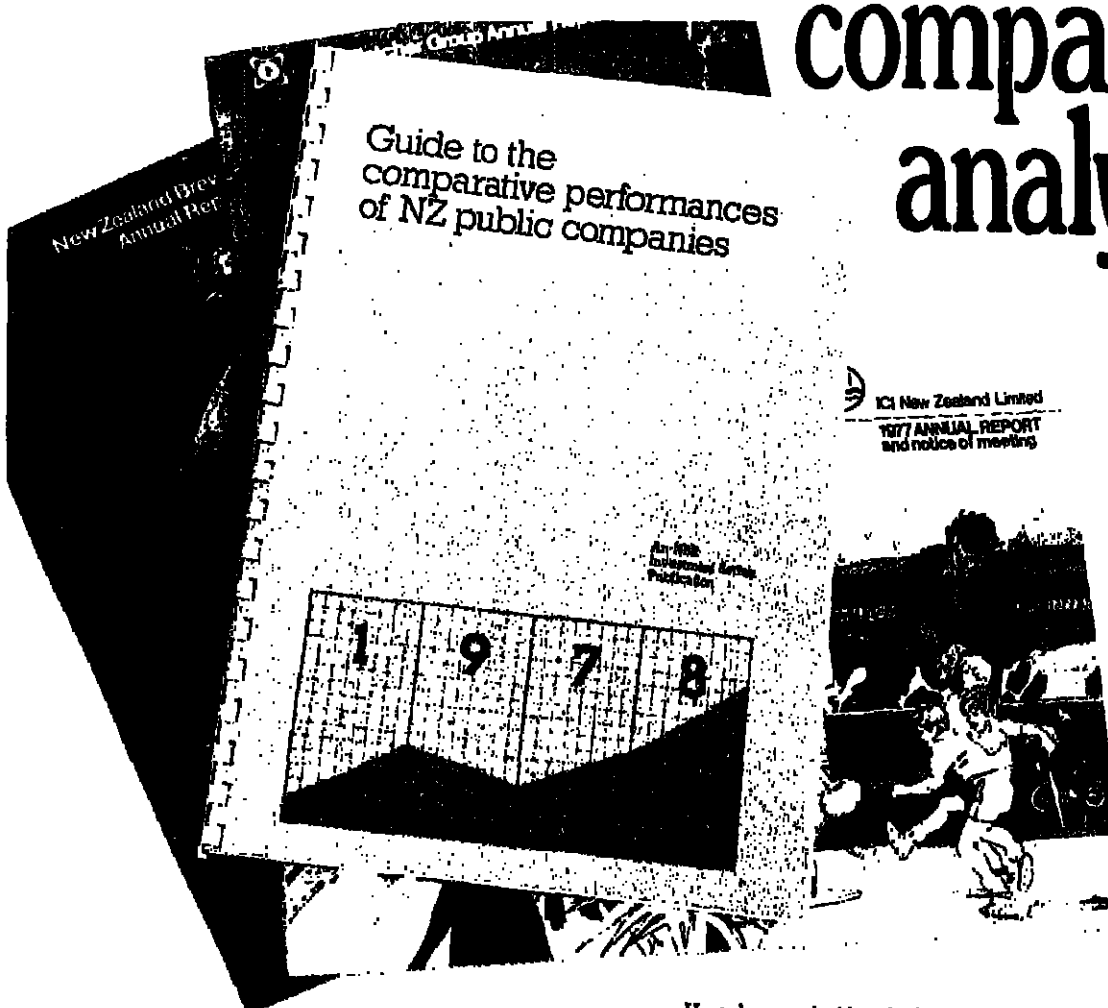
formation is regularly omitted from the reports of many companies, but it is important, because lack of disclosure can disguise an overall deterioration in financial stability and strength.

The group is financially strong, and a passage from the text emphasises the good control of recent years: "Nevertheless the company is in remarkably good shape. It has survived satisfactorily the critical period immediately following the completion of the Westport extension when liquidity was stretched, and it has reduced its overall liabilities from a balance date peak of \$32 million in 1976 to \$16.7 million as at 31st July last."

That statement is true, but its validity would be enhanced if the company provided more information in the areas indicated. The figures would then underpin the statement made in the text, and also support the textual comment "although some adverse comment is sometimes made regarding cement price increases, these have been no greater than the overall rise in the Consumer Price Index during the period and have had to include such major inputs as the 12.5 per cent increase in rail freight that became effective in July 1978."

That may be true, but when will we see the dollar impact of those cost increases, including the dollar effects of the freight increase?

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Benefits for NZ in successful EMS scheme

by Peter V O'Brien

THE rather esoteric topic of the European Monetary System has considerable importance for New Zealand, although the link between EMS and our economy is indirect.

A successful scheme of closer monetary co-operation would lead to a "zone of monetary stability in Europe" (taken from the communiqué of the Bremen European Council, July 6-7 1978).

The governments participating in EMS consider that the establishment of a stable and durable monetary system is in the interests of all members of the community.

If exchange rates were to receive new stability there would be an improvement in world trade, greater certainty in longer term investment decisions, and a lift in economic growth.

As New Zealand is a trading nation these factors are in our interests, as is any system which can act as a form of back-up or support for the US dollar, and reduce pressure on that currency.

The fact that the British have opted out of the system meanwhile does not mean that there is fundamental opposition. The British at this stage prefer to put domestic policy first, which should lead to a stable exchange rate. In addition there are reservations about technical aspects of EMS.

While people in London have a fear of statements being attributed to them, it became clear to me in discussions before Christmas that the political time is inappropriate for entry to EMS by the British.

The UK also apparently saw exchange stability related to the average of European currencies as the goal for achievement. But the system as it emerged seems to have gone beyond the British conception.

If inflation throughout the community (still considered the major evil) was to be stabilised under the German inflation rate, there would be considerable costs internally, because the restrictions necessary to achieve German inflation rates would be so

deflationary that they would affect growth, both in the countries having to take the action, and in the rest of the world. The latter would be affected under the spillover principle.

"Reliable sources" suggest that this was part of the debate on the British side, because exchange stability and control of inflation are inseparable. The Italians and the Irish, on the other hand, saw benefits which could flow from "resource transfers" to their countries from EMS. In the Irish case it was suggested in a White Paper on EMS that the pressure to hold the exchange rate could force the deficit in the balance of payments down faster than was desirable in the country's published long term economic strategy (yes,

the Irish, with the same population, have done what New Zealand seems unable to do; adopted a long-term economic strategy in public).

The deal worked out was "resource transfers" worth 275 million pounds over five years, or less than half what was asked for. Although some of these technical questions have interest for specialists, they have little to do with the effects of EMS on New Zealand.

Apart from the overall question of world trade, any stability in European exchange rates, plus the more distant possibility that this could flow over to stability for the US dollar (which has been sinking rapidly in recent weeks, particularly in the wake of the OPEC oil price

rise) might assist New Zealand in its loan business. Wild movements between currencies have hit New Zealand borrowers hard in foreign loans.

A stable European currency scene could help to iron out those movements which have seen interest and capital repayment bills increase by margins up to 50 or 60 per cent in short periods.

The outcome would depend on how EMS related to the weighted basket of currencies which sets the value of the New Zealand dollar, but there could be a useful spillover.

In general terms, there is a consensus that if EMS is sustainable it will grow stronger rather than weaker. Other sources suggest it will become entrenched, and will

tend to produce domestic reactions if it survives for three or four years.

The system would become a stabilising force in Europe, and will carry the implications that domestic economic policies in member countries will come closer together.

But entrenchment remains to be seen, at a time when Bretton Woods is a distant (although successful, in its time) memory, and snakes have been wandering up and down the currency trees for some years.

The success of EMS may benefit New Zealand in a few indirect ways. The discipline which EMS implies in domestic economies could certainly benefit us, if we were to accept the appropriate restraints.

Investment outlook for 1979

by Peter V O'Brien

THE art (or science) of fortune telling is difficult at any time. It has become harder in recent years when looking at investment and economic matters.

There was a day (probably pre-OPEC and pre-flexible interest rates) when one could analyse with reasonable confidence what would happen in broad terms in a given year. The world economy and the New Zealand economy have become much more volatile since then, with both international and national action on an official level leaving the analyst or forecaster with the need to be flexible, and to talk only in terms of what will be happening in the event of no policy changes.

The investment outlook for 1979 faces those problems. Several things are known about developments if there are no policy changes. Unfortunately, that knowledge is not confined to a privileged few, and therefore the developments will lead inevitably to policy changes.

The first point is that something will have to be done about monetary policy. The M3 definition of money, and private sector credit, were growing too fast at the end of last year. While the Government must, for political reasons, claim it has the situation under control, its claim is valid only so long as it makes regular, and sometimes rapid, policy changes.

Second, inflation seems likely to stay around present levels as a result of the impact of other policies. Third, the



INVESTOR INSIGHT

unemployment level will remain high. Fourth, the balance of payments is unlikely to show any significant improvement, particularly if overseas forecasts of a downturn, led by the United States, prove correct. If that happened, some easing of export receipts could be expected later in the year, while we might still be paying a higher total bill for the increase in imports needed to satisfy the demands of "stimulated" industry.

The interaction of these various matters suggests that interest rates will remain fairly high this year, with variations being dependent on what the Government decides to do in the marketplace.

High interest rates have their usual technical effect on the sharemarket, particularly in regard to the longer term rate on fixed term securities. As interest rates rise, so do dividend yields. With the exception of cases where dividend payments have been increased, a lift in a dividend yield must result in a cut in share price.

That is the technical side of

the calculation. Looking at the fundamentals, broad comments can be made about likely price movements, and company profitability, first if policy plays the same, and then in the light of possible policy changes to counteract the effects of the problems mentioned earlier.

The retail sector had a good Christmas. That was the culmination of a steady upturn which started as the Government pumped money into the economy through tax cuts, back pay, payouts to the farming community, and the other policies which resulted in the present unusually high budgetary deficit.

The retailers should enjoy the benefits of those moves for a few more months. Their profitability will then depend on the extent to which monetary conditions tighten, and any decisions (probably in the 1979 Budget) to attempt further redirection of the economy.

The construction sector seems destined to have another dull year, with the possible exception of those companies which are growing at the expense of competitors. A company like Mainzeim may come within that category.

Stock and station groups expect a reasonable period, at least for the first six months. In the second half of 1979 rising farm costs could again come up against static price realisations, thus putting pressure on the farmers' profitability. At that point the stock and station organisations would see their farm debt rising, whereas in 1978 (after a frightening start to the year) they saw it decline as official action pushed considerable sums into the rural areas.

The stock companies' non-rural business, which includes

manufacturing, urban car sales and retail estate work, and sundry activities, will vary depending on the business mix. For example, the car market, although improving at the end of last year, is unlikely to go into a boom, but activities which are export oriented should provide the companies with reasonable profits, as well as the usual tax concessions.

Exports will again be the key to overall profitability in industry. Apart from the stimulation (much of which appears artificial and unable to be maintained) of the economy, manufacturers will be taking advantage of markets outside New Zealand to lift production, improve total dollar returns, and to receive tax advantages under the incentive schemes.

More activity in takeovers is probable, if the events of the last three months in 1978 are a guide. Picking the likely candidates is the problem for investors, but good picking will lead to substantial capital gains.

Unless the Government discovers some dramatic new policies, or we have an oil strike, or the world prices for our primary produce soar (all unlikely events) the equity market overall should be quiet this year, with a few companies, as usual, doing better than the field.

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NBR SHAREMARKET SURVEY

WEEK ENDING JANUARY 18, 1979

1978 High Low	Last Sale	One High	Week's Low	Dividend %	Reported Turnover	Dividend Yield	P/E Ratio	1978 High Low	Last Sale	One High	Week's Low	Dividend %	Reported Turnover	Dividend Yield	P/E Ratio
90 90	ALDRIDGE, SAC	115 115	115 115	12.0	0	7.1	2.6	170 170	J. HARRIS	122 122	122 122	12.0	2100	13.1	5.7
115 115	A.J. WHITE	115 115	115 115	11.5	200	12.8	4.2	170 170	REARNS-WATINA	122 122	122 122	12.0	2100	13.1	5.7
240 245	ALCAN, SAC	240 245	240 245	14.0	3000	8.7	3.9	76 76	L.J. HUNTER, SAC	76 76	76 76	14.0	24000	4.2	3.1
72 72	ALLIANCE, SAC	72 72	72 72	13.0	1000	6.5	2.3	188 185	LANE, SAC	187 188	185 185	13.0	1500	11.1	3.3
240 258	ALLIED FARMERS	240 240	238 238	14.0	2100	3.8	6.9	88 85	L.D. MAYNARD	85 85	85 85	12.3	4100	7.4	5.9
127 127	ALLIED PRESS	127 127	127 127	10.5	1200	4.0	3.3	75 74	LEVLAND, SAC	74 75	74 74	15.0	46000	10.1	6.7
275 275	ALLOY STEEL	275 275	275 275	12.0	0	4.1	10.9	23 20	L.M. WILL, SAC	21 23	20 20	15.0	12000	10.1	6.7
140 140	ATLAS, SAC	140 140	140 140	11.5	0	6.4	6.4	115 112	LITTON	115 115	112 112	11.5	1900	24.3	4.8
190 190	AUTOPART, SAC	190 190	190 190	20.0	400	5.3	3.2	173 170	MAIR, SAC	173 173	170 170	20.0	1600	6.9	4.5
128 128	A. BAYNE	128 128	128 128	12.0	7000	9.4	5.1	102 100	MAIR, SAC	100 102	100 100	12.0	2400	4.0	4.2
125 125	A. SPRINGWALL	125 125	125 125	14.0	1000	11.2	2.7	172 170	MARCEL	170 172	170 170	14.0	3300	7.1	2.9
260 260	A. URGENT	260 260	260 260	17.0	800	6.3	3.1	130 130	MARCEL	130 130	130 130	17.0	1000	4.2	5.8
190 190	A. WATSON	190 190	190 190	14.0	1400	7.4	3.3	68 68	MCCARTHY, SAC	68 68	68 68	14.0	2400	24.2	1.7
125 125	A. WATSON	125 125	125 125	11.0	0	8.8	3.3	125 125	MCCARTHY, SAC	125 125	125 125	11.0	12000	4.6	3.7
175 175	ASHBY BROWN	175 175	175 175	22.5	100	12.9	2.1	125 125	MED. SUPPLIES	125 125	125 125	22.5	12000	4.6	3.7
200 195	A.S. PATTERSON	200 200	195 195	15.0	800	7.5	6.7	115 115	MILK, SAC	115 115	115 115	15.0	1200	4.6	3.7
51 50	A. S. PATTERSON	51 51	50 50	17.5	1500	17.5	2.7	115 115	MILK, SAC	115 115	115 115	17.5	1500	4.6	3.7
210 210	AUCAS, SAC	210 210	210 210	15.0	18000	3.3	19.4	115 115	MILK, SAC	115 115	115 115	15.0	18000	3.3	19.4
81 81	AUCAS, SAC	81 81	81 81	17.5	400	21.5	7.0	115 115	MILK, SAC	115 115	115 115	17.5	400	21.5	7.0
50 50	AUCAS, SAC	50 50	50 50	19.0	700	10.0	6.0	115 115	MILK, SAC	115 115	115 115	19.0	700	10.0	6.0
78 78	AUCAS, SAC	78 78	78 78	12.5	5500	8.0	6.2	115 115	MILK, SAC	115 115	115 115	12.5	5500	8.0	6.2
425 415	AUCAS, SAC	425 415	415 415	17.5	6.7	7.1	6.7	188 181	MILK, SAC	188 181	181 181	17.5	6.7	7.1	6.7
72 71	AUCAS, SAC	72 71	71 71	12.5	4300	8.7	5.2	115 115	MILK, SAC	115 115	115 115	12.5	4300	8.7	5.2
44 44	AUCAS, SAC	44 44	44 44	12.0	7100	13.0	3.4	115 115	MILK, SAC	115 115	115 115	12.0	7100	13.0	3.4
250 243	AUCAS, SAC	250 243	243 243	15.0	1500	5.7	6.0	115 115	MILK, SAC	115 115	115 115	15.0	1500	5.7	6.0
77 75	AUCAS, SAC	77 75	75 75	10.0	2900	10.0	5.8	115 115	MILK, SAC	115 115	115 115	10.0	2900	10.0	5.8
115 110	AUCAS, SAC	115 110	110 110	11.0	1100	10.5	3.7	115 115	MILK, SAC	115 115	115 115	11.0	1100	10.5	3.7
150 150	AUCAS, SAC	150 150	150 150	12.0	2200	7.5	5.0	115 115	MILK, SAC	115 115	115 115	12.0	2200	7.5	5.0
145 142	AUCAS, SAC	145 142	142 142	14.0	12000	7.5	5.4	115 115	MILK, SAC	115 115	115 115	14.0	12000	7.5	5.4
180 180	AUCAS, SAC	180 180	180 180	14.0	1400	10.0	6.0	115 115	MILK, SAC	115 115	115 115	14.0	1400	10.0	6.0
105 105	AUCAS, SAC	105 105	105 105	13.5	200	8.2	4.0	115 115	MILK, SAC	115 115	115 115	13.5	200	8.2	4.0
160 155	AUCAS, SAC	160 155	155 155	15.0	0	5.0	3.8	115 115	MILK, SAC	115 115	115 115	15.0	0	5.0	3.8
175 175	AUCAS, SAC	175 175	175 175	15.0	2100	4.1	7.5	115 115	MILK, SAC	115 115	115 115	15.0	2100	4.1	7.5
55 55	AUCAS, SAC	55 55	55 55	10.0	200	4.1	7.5	115 115	MILK, SAC	115 115	115 115	10.0	200	4.1	7.5
225 220	AUCAS, SAC	225 220	220 220	13.0	4700	4.7	4.3	115 115	MILK, SAC	115 115	115 115	13.0	4700	4.7	4.3
188 185	AUCAS, SAC	188 185	185 185	14.0	10700	7.0	5.3	115 115	MILK, SAC	115 115	115 115	14.0	10700	7.0	5.3
187 180	AUCAS, SAC	187 180	180 180	14.0	10700	7.0	5.3	115 115	MILK, SAC	115 115	115 115	14.0	10700	7.0	5.3
115 115	AUCAS, SAC	115 115	115 115	15.0	1200	10.0	5.4	115 115	MILK, SAC	115 115	115 115	15.0	1200	10.0	5.4
80 80	AUCAS, SAC	80 80	80 80	15.0	400	6.5	3.1	115 115	MILK, SAC	115 115	115 115	15.0	400	6.5	3.1
148 148	AUCAS, SAC	148 148	148 148	15.0	400	6.5	3.1	115 115	MILK, SAC	115 115	115 115	15.0	400	6.5	3.1
121 122	AUCAS, SAC	121 122	122 122	15.0	9700	11.1	4.2	115 115	MILK, SAC	115 115	115 115	15.0	9700	11.1	4.2
290 280	AUCAS, SAC	290 280	280 280	15.0	1800	5.0	2.1	115 115	MILK, SAC	115 115	115 115	15.0	1800	5.0	2.1
170 170	AUCAS, SAC	170 170	170 170	16.0	3100	5.0	2.7	115 115	MILK, SAC	115 115	115 115	16.0	3100	5.0	2.7
155 150	AUCAS, SAC	155 150	150 150	16.0	1100	5.2	3.3	115 115	MILK, SAC	115 115	115 115	16.0	1100	5.2	3.3
167 160	AUCAS, SAC	167 160	160 160	16.0	1700	3.0	3.8	115 115	MILK, SAC	115 115	115 115	16.0	1700	3.0	3.8
225 225	AUCAS, SAC	225 225	225 225	11.0	1700	10.0	3.8	115 115	MILK, SAC	115 115	115 115	11.0	1700	10.0	3.8
405 405	AUCAS, SAC	405 405	405 405	15.0	500	3.7	11.8	115 115	MILK, SAC	115 115	115 115	15.0	500	3.7	11.8
80 80	AUCAS, SAC	80 80	80 80	12.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	12.0	1400	8.5	3.0
205 205	AUCAS, SAC	205 205	205 205	10.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	10.0	1400	8.5	3.0
52 50	AUCAS, SAC	52 50	50 50	12.0	3200	11.5	2.7	115 115	MILK, SAC	115 115	115 115	12.0	3200	11.5	2.7
200 200	AUCAS, SAC	200 200	200 200	10.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	10.0	1400	8.5	3.0
200 200	AUCAS, SAC	200 200	200 200	10.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	10.0	1400	8.5	3.0
200 200	AUCAS, SAC	200 200	200 200	10.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	10.0	1400	8.5	3.0
200 200	AUCAS, SAC	200 200	200 200	10.0	1400	8.5	3.0	115 115	MILK, SAC	115 115	115 115	10.0	1400	8.5	3.0
155 155	AUCAS, SAC	155 155	155 155	10.0	0	5.3	7.3	115 115	MILK, SAC	115 115	115 115	10.0	0	5.3	7.3
135 135	AUCAS, SAC	135 135	135 135	10.0	4000	10.0	1.3	115 115	MILK, SAC	115 115	115 115	10.0	4000	10.0	1.3
181 181	AUCAS, SAC	181 181	181 181	12.5	0	11.7	8.6	115 115	MILK, SAC	115 115	115 115	12.5	0	11.7	8.6
100 107	AUCAS, SAC	100 107	107 107	15.0	21000	6.0	5.8	115 115	MILK, SAC	115 115	115 115	15.0	21000	6.0	5.8
98 97	AUCAS, SAC	97 98	97 97	16.5	2800	8.5	3.5	115 115	MILK, SAC	115 115	115 115	16.5	2800	8.5	3.5
122 122	AUCAS, SAC	122 122	122 122	16.0	900	5.7	5.6	115 115	MILK, SAC	115 115	115 115	16.0	900	5.7	5.6
213 210	AUCAS, SAC	212 213	210 210	18.0	200	12.0	4.2	115 115	MILK, SAC	115 115	115 115	18.0	200	12.0	4.2
125 125	AUCAS, SAC	125 125	125 125	16.0	1500	4.4	4.3	115 115	MILK, SAC	115 115	115 115	16.0	1500	4.4	4.3
91 95	AUCAS, SAC	91 95	93 93	16.0	1500	4.4	4.3	115 115	MILK, SAC	115 115	115 115	16.0	1500	4.4	4.3
130 130	AUCAS, SAC	130 130	130 130	11.0	2700	10.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2700	10.0	3.9
141 141	AUCAS, SAC	141 141	141 141	11.0	1100	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	1100	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800	11.0	3.9
100 100	AUCAS, SAC	100 100	100 100	11.0	2800	11.0	3.9	115 115	MILK, SAC	115 115	115 115	11.0	2800		